



west virginia department of environmental protection

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Division of Water and Waste Management Water Quality Standards Program Requirements Governing Water Quality Standards Rule

On May 25, 2018, the Department of Environmental Protection (DEP) Division of Water & Waste Management commenced a forty-five day public comment period and subsequently held a public hearing on July 10, 2018 to accept oral and written comments on proposed revisions to the WV legislative rule “Requirements Governing Water Quality Standards,” 47 CSR 2. DEP proposed the following substantive revisions (summarized):

- 5.2.h.5 Allow overlapping mixing zones (as per HB 2506)
- 8.2.b Harmonic mean as critical design flow for human health criteria (as per HB 2506)
- 8.5.a Adding Biotic Ligand Model (BLM) for copper
- 8.23 Revising human health criteria to match EPA-recommended criteria

Public Notice, Hearing, and Comments

The following sections are included:

- A. Statement of Notices to Public**
- B. DEP response to comments**
- C. Written & Oral comments**



A. Notices to Public

The public was noticed of WV Water Quality Standards (WQS) 2018 proposed rule changes in several ways. On May 25, notice of proposed changes to 47 CSR 2 was published on the WV Secretary of State's website, and subsequently on June 1 in the WV State Register, Volume XXXV, Issue 22. On May 29 the DEP WQS Program sent an email notice to previous attendees of WQS public meetings, and a press release was sent from DEP Public Information Office on May 30. A legal ad regarding proposed rule changes was published in The Charleston Gazette-Mail newspaper on June 6. All notices gave a brief summary of the proposed rule changes, provided access to the proposed rule, and notified the public that the comment period would be open until the end of the public hearing at 6PM on July 10 in Charleston, WV at WV DEP Headquarters.



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B. DEP response to comments

WV Department of Environmental Protection (DEP) response to comments to 47 CSR 2 Rule Revisions

DEP is grateful to every person and organization who participated in this public process to revise 47 CSR 2 Requirements Governing Water Quality Standards rule. Because water quality is a concern for everyone who lives, works, and plays in West Virginia, public involvement in this process is invaluable. DEP thanks you for providing your views and concerns on this very important subject. Specific responses to comments may be found below.



Written Comments on 2018 Proposed WQS Rule – DEP Responses

Commenter: American Electric Power (AEP) (Comments pages 1-5)

AEP Comment 1: *“Overlapping Mixing Zones.” AEP suggests leaving paragraph 5.2.h.5 as is, and instead amending subdivision 5.2.j.*

DEP Response: DEP has proposed to allow overlapping mixing zones consistent with the Legislative revision of W. Va. Code §22-11-7b(c), which allows the Secretary to permit mixing zones to overlap, but not go beyond one-half mile upstream of a public water supply. This change, however, does not preclude DEP from requiring mixing zones to comply with all other guidelines and conditions of mixing zones, as established in 47 CSR 2 Section 8.5.2. In order to implement the changes made by the WV Legislature, as well as to ensure any permitted overlapping mixing zones also comply with all other mixing zone requirements, DEP has proposed to amend Paragraph 5.2.h.5, which currently expressly prohibits overlapping mixing zones. Leaving Paragraph 5.2.h.2 as is would create confusion, as it currently states “mixing zones shall not ... overlap one another.” The proposed change will eliminate this prohibition of overlapping mixing zones. Furthermore, as DEP received several comments asking to clarify the subsection referred to in the proposed language for paragraph 5.2.h.5, the amended section 5.2.h.5 will read:

“5.2.h.5. Overlap one another, **except that the secretary may allow mixing zones for human health criteria to overlap; provided, the overlapping mixing zones comply with all guidelines and conditions of subsection 5.2 herein.**”

AEP Comment 2: *“Methodologies for Site-Specific Criteria.” AEP asks that “a site-specific criterion for copper be allowed using methods other than the BLM. Other methods include a WER study, the recalculation procedure, or the resident species procedure (as discussed in US EPA’s Water Quality Standards Handbook). A BLM-based site-specific criterion for copper is **predictive** in nature regarding potential toxicity whereas a WER study is **confirmatory** (standard test organisms are tested using site water).” AEP also notes the “need to discuss with DEP a suitable number of sampling locations and sampling events” before using either of these methods to develop criteria.*

DEP Response: DEP has proposed both the use of the biotic ligand model (BLM) and the Water Effect Ratio (WER) as part of the NPDES permitting process, and both would be



able to be used to develop site-specific copper criteria. The Water Effect Ratio is established for use with metals, including copper. The BLM process specified in the proposed language is specifically for use with copper. Both processes are recommended by EPA to determine the effects of copper on aquatic life in a specific site. As the commenter stated, while the BLM process uses several chemical and biological parameters from a waterbody to predict toxicity, the WER process tests ambient water to determine how organisms react to it, determining whether the water is protective. Both approaches are EPA-approved processes, thus should prove effective to establish protective site-specific criteria through the NPDES permitting process, rather than through the lengthy process of rulemaking. DEP does not propose to use this streamlined process for any other types of site-specific criteria revision. Regarding this provision, in order to make it more clear that the WER process described includes the procedure used to develop site-specific copper criteria, DEP has added to 47 CSR 2 subdivision 8.5.a so that it reads:

8.5.a. A site-specific numeric criterion may be established as part of the NPDES permitting process using any of the following established methods: a Water Effect Ratio study pursuant to the procedures described in U.S. EPA's "Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals" (February 1994); the Streamlined Water-Effect Ratio Procedure for Discharges of Copper (March 2001); a Biotic Ligand Model analysis pursuant to the procedures described in U.S. EPA's "Aquatic Life Ambient Freshwater Quality Criteria – Copper" (February 2007).

Regarding the need for DEP guidance on the number of sampling locations and sampling events, as well as the need for DEP guidance in general throughout the development of either WER or BLM criteria, DEP expects to work closely with permittees to develop these criteria. Specifically, the Division of Water and Waste Management Water Quality Standards Program and NPDES Permitting Program will work closely with the permittee to ensure protective site-specific criteria are developed.

AEP Comment 3: *AEP recommends that DEP "conduct a cost impact analysis regarding how the regulated community would be affected when these revised criteria are implemented."*

DEP Response: Please see DEP response to WVCA Comment 4.

AEP Comment 4: *(labeled Comments C2-C4 in AEP comment letter) AEP states "DEP made no attempt to evaluate the various criteria input variables" to determine if "the inputs were technically valid and not over-protective" and "appropriate for implementation in West Virginia." AEP also objects to the use of a 20% relative source contribution (RSC) recommending the use of*



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50% RSC. Additionally, AEP objects to the use of the 22g/day fish consumption rate used by EPA, and to the “compounding effects of overly-conservative input variables.”

DEP Response: Please see DEP response to WVCA Comment 2. In addition, relative to the recommendation to use an RSC of 50%, in the absence of scientifically defensible research that would lead to a relative source contribution of 50%, DEP has chosen to go with the NHANES determination of RSC values ranging from 20-80 percent, based upon available exposure data.

Commenter: Buchanan Minerals (Comments pages 6-8)

Comment: *Buchanan Minerals comments are similar in form and substance to comments made by the West Virginia Coal Association.*

DEP Response: Please see DEP responses to comments made by WVCA.

Commenter: Copper Development Association (CDA) and GEI Consultants

(Comments pages 9-14)

CDA/GEI Comment: *CDA and GEI Consultants encourage DEP to adopt the biotic ligand method (BLM) for copper statewide, replacing the current hardness-based numeric criterion. However, CDA and GEI Consultants acknowledge the site-specific approach may be more practical, but ask that DEP considers adding a footnote to 47 CSR 2 Appendix E Table 1 noting the ability to use the BLM for copper.*

DEP Response: DEP has proposed to retain West Virginia’s statewide hardness-based copper criterion, and to add the biotic ligand model (BLM) for the establishment of a site-specific copper criterion through the NPDES permitting process. West Virginia’s statewide copper criterion is protective of aquatic life, and takes into consideration the varying toxicity of copper related to water hardness. The BLM approach gives permittees an alternative method for establishing a protective copper concentration as it considers several parameters which can affect copper toxicity on a site-specific basis. Because the BLM method was adopted into U.S. EPA’s “Aquatic Life Ambient Freshwater Quality Criteria – Copper” in 2007, use of the BLM method as an alternative approach is encouraged for West Virginia permittees interested in establishing a site-specific copper



criterion; however, DEP intends to also keep the statewide hardness-based copper criterion.

Commenter: U.S. Environmental Protection Agency (Comments pages 15-19)

EPA Comment 1: *Critical Design Flow for and Assessment of Human Health Criteria - EPA states that “harmonic mean flow should be used to implement human health criteria in the calculation of NPDES water quality-based effluent limits,” and that it “would be consistent with W. Va. Code §22-11-7b(c), which EPA approved on January 26, 2018.” EPA goes on to recommend “harmonic mean flow be used to implement human health criteria because, by and large, human health criteria are designed to protect an individual over a lifetime of exposure, and so EPA attempts to match the longest stream flow averaging period (i.e., harmonic mean flow) with the criteria which is protective over a human lifetime.” However, EPA questions DEP’s proposal of changes to footnotes 3 and 4 of Appendix E, and recommends using geometric mean for assessment of human health criteria, as opposed to the “thirty-day average concentration” that DEP has proposed. EPA’s reasoning for this recommendation is again the long-term exposure effects of chemical water quality criteria.*

DEP Response: Regarding DEP’s proposed changes to footnotes 3 and 4 of Appendix E, the point is well-taken that annual geometric mean would provide a more appropriate assessment methodology than using a thirty-day average. The revised language for footnotes 3 and 4 of 47 CSR 2 Appendix E Table 1 reads as follows:

³ These criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted. ~~Concentration~~ Annual geometric mean concentration not to be exceeded, unless otherwise noted.

⁴ These criteria have been calculated to protect human health from toxic and/or organoleptic effects through drinking water and fish consumption, unless otherwise noted. ~~Concentration~~ Annual geometric mean concentration not to be exceeded, unless otherwise noted.

EPA Comment 2: *Site-Specific Numeric Water Quality Criteria – In regards to DEP’s proposed changes to site-specific revision of certain water quality criteria, including copper, EPA states that such revision, “if finalized, is not a water quality standard subject to EPA review under CWA §303(c), and that “as written, WVDEP’s addition of this process does not change the requirement that for criteria, including site-specific criteria, to be effective for CWA purposes, they are required to be individually approved by EPA under its CWA §303(c) authority.”*



DEP Response: DEP has proposed to revise 47 CSR 2-8.5 to provide permittees an opportunity to use either the Water Effect Ratio for Metals or the Biotic Ligand Model for copper through the NPDES permitting process. The BLM method was adopted into U.S. EPA's "Aquatic Life Ambient Freshwater Quality Criteria – Copper" in 2007, and is thus an EPA-approved method for evaluating the potential effects of copper on localized aquatic communities. The Water Effect Ratio has been an option since EPA's publishing in 1994 of the "Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals." To ensure the WER approach can be used for copper, DEP is proposing to add language as specified below to the proposed revision, to include reference to the "Streamlined Water-Effect Ratio Procedure for Discharges of Copper" (March 2001). Both the WER and the BLM process are recommended by EPA to determine the effects of copper on aquatic life in a specific site. While the BLM process uses several chemical and biological parameters from a waterbody to predict toxicity, the WER process tests ambient water to determine how organisms react to it, determining whether the water is protective. Both approaches are EPA-approved processes, thus should prove effective to establish protective site-specific criteria through the NPDES permitting process, rather than through the lengthy process of rulemaking. DEP does not propose to use this streamlined process for any other types of site-specific criteria revision.

Furthermore, because both the BLM and WER process are complex and require planning to implement properly, DEP expects to work closely with permittees to develop these site-specific criteria. DEP intends to be involved at all stages of this process, offering guidance on study plan including the number of sampling locations and sampling events, as well as guidance in general throughout the development of these criteria. Specifically, the Division of Water and Waste Management Water Quality Standards Program and NPDES Permitting Program will work closely with the permittee to ensure the development of protective site-specific criteria.

As EPA acknowledges, this revision does not constitute a water quality standard subject to EPA review; indeed, given that both processes DEP is proposing are EPA-approved methods, and given that EPA has the opportunity to review, comment, and object to each NPDES permit, this approach should not also require EPA review and approval under CWA §303(c). As revised, DEP proposed language for 47-2-8.5.a reads:

8.5.a. A site-specific numeric criterion may be established as part of the NPDES permitting process using any of the following established methods: a Water Effect Ratio study pursuant to the procedures described in U.S. EPA's "Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals" (February 1994); the Streamlined Water-Effect Ratio Procedure for Discharges of Copper (March 2001); a Biotic Ligand Model analysis pursuant to the procedures described in U.S.



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EPA's "Aquatic Life Ambient Freshwater Quality Criteria – Copper" (February 2007).

EPA Comment 3: *New or Updated CWA §304(a) Criteria Recommendations – EPA states that per 40 CFR §131.20(a), "states are required to provide an explanation if not adopting new or revised criteria for parameters for which EPA has published new or updated CWA §304(a) criteria recommendations." EPA lists recommended criteria which DEP has not proposed to adopt during this triennial review, and notes that DEP will need to provide an explanation for each of these.*

DEP Response: DEP has proposed to incorporate several of EPA's 2015-recommended human health criteria into West Virginia's Water Quality Standards. For any EPA-recommended criteria that DEP does not end up adopting, DEP will provide explanation when the final Legislatively-approved rule is submitted to EPA for CWA §303(c) approval.

Commenter: Gauley River Power Partners (Comments pages 20-21)

GRPP Comment: *Gauley River Power Partners asks for "clarification of 'spawning area' and whether the Summersville tailwater is a 'spawning area' within 8.29.2 and/or affording the tailwater a site-specific water quality criterion for temperature relative to the upstream impoundment would afford reasonable certainty that temperature limits could be achieved."*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Commenter: Mission Coal Company (Comments pages 22-24)

Comment: *Mission Coal Company comments are similar in form and substance to comments made by the West Virginia Coal Association.*

DEP Response: Please see DEP responses to comments made by WVCA.

Commenter: Mountain State Carbon (Comments pages 25-37)

MSC Comment 1: *MSC recommends the DEP preserve the currently-effective human health water quality criteria, for the following reasons: MSC argues that states are not required to adopt the Nationally Recommended Human Health Water Quality Criteria (NRHHWQC); that the 2015*



USEPA NRHHWQC are overly conservative; that USEPA failed to correct critical flaws and errors in methodology in publishing its 2015 NRHHWQC; that development of the USEPA NRHHWQC was controversial; that the DEP's comments to USEPA of the May 2014 Draft NRHHWQC remain valid; that the NRHHWQC do not consider state-specific data; and that regional states are not adopting the NRHHWQC.

DEP Response: Regarding MSC comments that USEPA NRHHWQC are overly conservative and controversial, please see DEP response to WVCA Comment 2.

In response to MSC's comment that states are not required to adopt the NRHHWQC, indeed states are *not* required to adopt EPA recommended criteria exactly as recommended. However, states are required by Section 303(c)(1) of the Clean Water Act to review criteria every three years, decide which recommended criteria they will adopt, and decide whether they will modify the nationally-recommended criteria based on state or region-specific data. This triennial review of water quality criteria has led DEP to commence this revision of 47 CSR 2, and to propose to update West Virginia's human health criteria.

In regards to DEP comments on the EPA Draft of NRHHWQC, May 2014, the following is an excerpt from EPA's response to DEP's comments:

“...water quality criteria developed by EPA under section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. Section 304(a) criteria do not reflect consideration of economic impacts or the technological feasibility of meeting pollutant concentrations in ambient water (EPA 822-R-15-001).”

Although the issues raised by DEP in 2014 were technically valid, in many cases regulatory practices related to the proposed human health criteria will not be affected. Effectively, NPDES permittees are only able to submit analytical results in Discharge Monitoring Reports (DMRs) that are within laboratory technological capabilities. Permittees will not be penalized if a standard is set lower than analytical instrumentation is capable of detecting nor will they be expected (or permitted) to submit results that are not within technological capabilities of that instrumentation. In a situation where standards are set below what is achievable by current analytical technology, permittees are required to submit data with detection limits that are achievable by the best available technology and methodology and these data are used to assess compliance.



Additionally, EPA points out that water quality standards are to be set based solely on data and scientific judgements on the relationship between pollutant concentrations and environmental and human health effects. Taking extraneous factors into account would not be appropriate when setting these standards since the sole purpose of the standards is to be protective of human health, and since they must be derived from scientifically defensible data and studies that demonstrate that they are protective. DEP has extensively reviewed EPA's human health criteria calculation methodology and concur that the recommended standards would be protective based on the scientific information that is available.

MSC Comment 2: *MSC endorses DEP's proposed revision to allow overlapping mixing zones for human health water quality criteria, but suggests amending Subsection 5.2.j to allow dischargers to provide a demonstration which would allow an overlapping mixing zone, like the demonstration now provisioned by subsection 5.2.j to waive the requirements of Subdivision 5.2.e and Paragraph 5.2.h.2.*

DEP Response: Please see DEP response to AEP Comment 1.

MSC Comment 3: *MSC endorses the DEP's proposed revision to adopt the harmonic mean flow as the critical design flow to develop water quality-based effluent limits based on human health water quality criteria.*

DEP Response: Thank you for your comment.

MSC Comment 4: *MSC endorses DEP's proposed revision to allow for development of site-specific criteria for copper based on a biotic ligand model.*

DEP Response: Thank you for your comment.

MSC Comment 5: *MSC believes the "fiscal note" provided on page 2 of the revised WQS proposed by DEP does not meet the requirements of West Virginia Administrative Procedures Act §29A-3-1.*

DEP Response: Please see DEP response to WVCA Comment 4.

Commenter: Ohio Valley Environmental Coalition (OVEC) (Comments page 38)

OVEC Comment 1: *OVEC urges DEP to adopt all 94 of the 2015 Nationally Recommended Human Health Water Quality Criteria (NRHHWQC).*



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DEP Response: Please see DEP response to WVRC Comment 6.

OVEC Comment 2: *OVEC requests language to be added to 47 CSR 2 which would require the “evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants” in relation to the provision for overlapping mixing zones.*

DEP Response: Please see DEP response to WVRC Comment 1.

OVEC Comment 3: *OVEC asks that DEP apply a more protective method for calculating discharge limits for pollutants known to have a short-term exposure risk, rather than using harmonic mean flow.*

DEP Response: Please see DEP response to WVRC Comment 4.

OVEC Comment 4: *OVEC asks why the DEP “would choose to weaken water quality standards,” and states the changes “only benefit the big industry polluters and not the public at large.”*

DEP Response: The human health water quality standards revisions being proposed by DEP will better protect the people of West Virginia. Designated uses related to human health include the use of water for fishing, swimming and public water supply. DEP has proposed revisions to human health uses in this triennial review which consider the most recent and reliable scientific data to ensure West Virginia’s water quality standards protect an individual over a lifetime of exposure. This revision will make many of West Virginia’s human health criteria more stringent than they currently are; in fact, of the criteria revisions proposed, over half of them are more stringent than the criteria currently in 47 CSR 2. DEP is tasked by W. Va. Code to propose rules which present standards of water quality which “protect the public health and welfare, wildlife, fish and aquatic life and the present and prospective future uses of the water for domestic, agricultural, industrial, recreational, scenic and other legitimate beneficial uses thereof” (W.Va. Code §22-11-7b(c)). The proposed revisions will do just that.

Commenter: West Virginia Municipal Water Quality Association (Comments pages 39-40)

WVMWQA Comment 1: *WVMWQA states that “it makes no sense to permit point sources using the harmonic mean flow and then assess instream water quality compliance based upon 7Q10 conditions.”*



DEP Response: DEP's proposed change in regards to harmonic mean is consistent with Legislative revisions made to W. Va. Code §22-11-7b(c) which state "for implementing human health criteria for the protection of drinking water, the Secretary shall calculate permit limits using the harmonic mean flow." In addition, DEP has made changes to Footnotes 3 and 4 of 47 CSR 2 which will provide duration for the assessment of human health criteria by using an annual geometric mean concentration, which will allow assessment to take into account both high and low flow conditions. The revised language for footnotes 3 and 4 of 47 CSR 2 Appendix E Table 1 reads as follows:

³ These criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted. ~~Concentration~~ Annual geometric mean concentration not to be exceeded, unless otherwise noted.

⁴ These criteria have been calculated to protect human health from toxic and/or organoleptic effects through drinking water and fish consumption, unless otherwise noted. ~~Concentration~~ Annual geometric mean concentration not to be exceeded, unless otherwise noted.

WVMWQA Comment 2: *WVMWQA requests changing footnotes 3 and 4 in Appendix E Table 1 to read "annual average criteria concentration not to be exceeded."*

DEP Response: After some consideration, DEP has decided to change these two footnotes to better account for the long-term exposure duration of human health criteria. Since human health criteria are designed to protect an individual over a lifetime of exposure, it makes sense to use a longer duration. In addition, the use of a geometric mean instead of the thirty-day average is more appropriate to account for long-term exposure. The revised language for footnotes 3 and 4 of 47 CSR 2 Appendix E Table 1 reads as follows:

³ These criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted. ~~Concentration~~ Annual geometric mean concentration not to be exceeded, unless otherwise noted.

⁴ These criteria have been calculated to protect human health from toxic and/or organoleptic effects through drinking water and fish consumption, unless otherwise noted. ~~Concentration~~ Annual geometric mean concentration not to be exceeded, unless otherwise noted.



Commenter: West Virginia Rivers Coalition, along with Braxton Citizens' Action, WV Citizen Action Group, WV Surface Owners Rights Organization, Ohio Valley Environmental Coalition, League of Women Voters of WV, WV Highlands Conservancy, Mountain Lakes Preservation Alliance, Indian Creek Watershed Association, Eight Rivers Council, Christians for the Mountains, Mid-Ohio Valley Climate Action, Appalachian Mountain Advocates, and WV Council of Churches_(Comments pages 41-45)

WVRC Comment 1: *WVRC asks that DEP add language to 47 CSR 2 that addresses the issue of evaluating the cumulative effects in NPDES permits of overlapping mixing zones, and the “synergistic effects of pollutants on human health as a condition of the Secretary’s approval of overlapping mixing zones.”*

DEP Response: DEP will address the potential cumulative effects of any overlapping mixing zones as they are permitted in the NPDES process. The Water Quality Standards rule, 47 CSR 2, is charged with proposing rules which “protect the public health and welfare, wildlife, fish and aquatic life and the present and prospective future uses of the water for domestic, agricultural, industrial, recreational, scenic and other legitimate beneficial uses thereof” (W.Va. Code §22-11-7b(c)); as such, 47 CSR 2 does not typically prescribe specific requirements of NPDES permits.

WVRC Comment 2: *WVRC requests that DEP clarify “its interpretation of ‘this subsection’” in 47 CSR 2 proposed Paragraph 5.2.h.5.*

DEP Response: DEP received several such comments asking for clarification of the subsection referred to in the proposed language for paragraph 5.2.h.5. Because the change made by WV Legislature does not preclude mixing zones from complying with all other guidelines and conditions of mixing zones, as established in 47 CSR 2 Section 8.5.2, paragraph 5.2.h.5 has been amended to read:

“5.2.h.5. Overlap one another, **except that the secretary may allow mixing zones for human health criteria to overlap; provided, the overlapping mixing zones comply with all guidelines and conditions of subsection 5.2 herein.**”

WVRC Comment 3: *WVRC states DEP needs to “detail in its rulemaking how this signage requirement is to be implemented, including specific language that must be posted,” and recommends specific language to be used on such signage.*



DEP Response: DEP requires signage for each outlet in every NPDES permit issued. In any future permits involving overlapping mixing zones, an additional condition will be added specifying the additional requirements for signage pursuant to §22-11-7b(c). The Water Quality Standards rule, 47 CSR 2, does not prescribe specific requirements of NPDES permits.

WVRC Comment 4: *WVRC states concern for the change to calculating critical design flow for human health criteria using the harmonic mean, stating concern that “this change does not take into account pollutants for which criteria are based on short-term exposures,” specifying nitrate as an example.*

DEP Response: Changing critical design flow to harmonic mean does not change the fact that NPDES permits are written to establish water quality based effluent limits which meet water quality criteria and protect all designated uses of the waterway. Whether the criterion was developed to protect long term or short term exposures, the protective water quality criterion will still be met either at the end of pipe, or at the edge of the mixing zone. EPA stated in its approval letter for changes to W. Va. Code §22-11-7b(c) based on HB2506, “The use of harmonic mean flow is consistent with EPA guidance in its Water Quality Standards Handbook, Chapter 5 General Policies, EPA 820-B-14-004, September 2014. EPA also indicated in the Federal Register notice announcing revisions to the Agency’s methodology for deriving human health criteria in 2000 (65 FR 66443, 11,3.2000) that harmonic mean flow should be used to implement human health criteria in NPDES permitting.”

WVRC Comment 5: *WVRC states: “Our assumption at this point is the West Virginia [fish consumption] studies are not as extensive or comprehensive as the EPA studies,” and that they therefore support EPA’s default consumption rates. WVRC also notes there is a “statewide fish consumption advisory for all waterbodies within West Virginia,” and that using EPA’s fish consumption rate would give “the state’s residents a better chance at recovering these rivers and streams so that it once again safe to eat the fish.”*

DEP Response: DEP had a fish consumption study conducted by Responsive Management in 2008 which specifically studied West Virginia residents’ fish consumption (Responsive Management 2008). The survey was conducted with questions developed from the direction and recommendations of EPA and the Food and Drug Administration (FDA), and surveyed 1,687 WV residents, collecting information from each survey respondent regarding their last 12 months of fish consumption of any kind from any source. Respondents to the study specifically reported having eaten trout, tilapia, catfish/bullhead, bass, panfish, and walleye/sauger. This includes fish purchased from a



grocery store, caught fish, and fish eaten in restaurants. This study is technically valid and appropriate for use in the calculation of human health criteria for West Virginia, and EPA encourages the use of state-specific fish consumption data wherever possible. In fact, EPA states in its *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* that their “four preference hierarchy is: (1) use of local data; (2) use of data reflecting similar geography/population groups; (3) use of data from national surveys; and (4) use of EPA’s default intake rates” (USEPA 2000). The Responsive Management study uses local data to provide a fish consumption rate of 9.9 grams per day specific to the population of West Virginia. This rate represents the 90th percentile of consumption of freshwater fish for West Virginia adults 18 years of age and older. DEP has determined this study to be the most appropriate to represent the fish consumption rates of West Virginians, and it has been incorporated into these revisions to 47 CSR 2.

Regarding the statewide fish consumption advisory, while there is a general advisory given from the West Virginia Department of Health and Human Resources (DHHR) for consuming several species of fish from any waters in West Virginia due to the potential for contamination from mercury and PCBs, and specific advisories for these pollutants plus dioxin for particular waterbodies (DHHR 2018), DEP is not proposing to revise any of these three criteria at this time. Additionally, EPA has not included any of these in its recent revision of 94 human health criteria. Therefore, the proposed changes will have no effect on this advisory.

WVRC Comment 6: *WVRC recommends that DEP adopt all 94 criteria updates recommended by EPA in the 2015 human health criteria update, citing neighboring states which “have chosen to take this proactive approach.”*

DEP Response: To date, DEP has never revised as many as 56 criteria changes during the same review year; and in fact, in this revision, 4 additional phthalate criteria are being proposed to replace the total phthalate criteria. This revision will make many of West Virginia’s human health criteria more stringent than they currently are; in fact, of the 60 revisions proposed, over half of them are more stringent than the criteria currently in 47 CSR 2. The proposed criteria reflect only criteria which previously existed in 47 CSR 2, adding no entirely new compounds to West Virginia’s standards. All criteria being revised have already been in WV standards for some time. If future needs call for the adoption of the additional nationally-recommended criteria, they can be added during a subsequent triennial review.



Commenter: West Virginia Coal Association (Comments pages 46-49)

WVCA Comment 1: *WVCA supports the proposed changes to 47 CSR 2 Section 8.5 to allow for development and approval of certain site-specific criteria during the permitting process. WVCA does note, however, that while in the Notice of Public Comment DEP indicates only changes to site-specific criteria for copper, the actual language in 47 CSR 2 Section 8.5.a indicates that the Water Effects Ratio method may be used for any metals.*

DEP Response: DEP agrees that the Water Effect Ratio may be used for metals in general, not just for copper. The “Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals” referenced in Subdivision 8.5.a allows this method to be used for metals in general, and DEP did not intend to imply otherwise in summary accompanying the Notice of Public Comment.

WVCA Comment 2: *WVCA states that “DEP must not accept EPA’s National Recommended Criteria without a thorough, scientific review to determine whether the criteria were developed properly and are appropriate for application in West Virginia.” WVCA further states that “the blind adoption of federally-developed criteria by WV DEP for implantation in the state is a serious dereliction of the agency’s Legislative-delegated responsibility to implement water quality standards that are specifically appropriate for West Virginia.*

DEP response: DEP has done a thorough review of the Nationally Recommended Human Health Water Quality Criteria that were finalized by EPA in 2015. Although DEP did a triennial review of WV Water Quality Standards in 2015-16, DEP did not propose to adopt EPA’s 2015 criteria at that time, the purpose of which was to give more time to thoroughly understand how each input variable was calculated, and how the resulting criteria were affected.

The proposed human health criteria incorporate the latest exposure factors for body weight, drinking water intake, and fish consumption. The proposed criteria incorporate, when possible, measured or estimated bioaccumulation factors (BAFs) which account for contaminant accumulation in aquatic organisms from all potential exposure routes. Additionally, the proposed human health criteria incorporate updated reference dose and cancer slope factors based on the latest available, relevant scientific information and studies (EPA-820-F-15-001). A summary of the inputs used in the calculation of the proposed human health criteria is provided below.

Human body weight – The default body weight used in the proposed criteria calculation is 80 kilograms (176 lbs). This is the mean body weight for adults ages 21 and older based on data from the National Health and Nutrition Examination Survey (NHANES) conducted by



the Centers for Disease Control and Prevention (CDC), from 1999 – 2006. The previous default body weight was 70 kilograms (154 lbs.) and was based on the NHANES data from 1988-1994 (EPA-820-F-15-001). DEP has extensively evaluated the methodology of the NHANES study and has concluded that the derived human body weight is representative of the population of the United States and is therefore technically valid and appropriate for use in the calculation of human health criteria for West Virginia.

Drinking water intake – The default drinking water intake used in the proposed criteria calculation is 2.4 liters per day. This is based on NHANES data collected from 2003 to 2006 for the 90th percentile of water consumption in adults ages 21 and older. The previously recommended default drinking water intake rate was 2 liters per day which represented the water ingestion rate at the 86th percentile for adults surveyed in the US Department of Agriculture’s 1994-1996 Continuing Survey of Food Intake by Individuals (CSFII) analysis and the 88th percentile of adults in the National Cancer Institute study of the 1977-1978 Nationwide Food Consumption Survey (EPA-820-F-15-001). DEP has extensively evaluated the NHANES study for technical validity of the drinking water intake value. This study assigned analysis weights to respondents enabling each individual respondent to be representative of other persons in the population having similar characteristics and is therefore representative of the population of the United States and technically valid and appropriate for use in the calculation of human health criteria for West Virginia.

Fish Consumption – The default fish consumption rate used in the EPA calculation is 22 grams per day. This rate represents the 90th percentile of consumption of freshwater and shellfish from inland and near shore waters for adults 21 years of age and older, based on NHANES data from 2003 to 2010. The previous fish consumption rate was 17.5 grams per day based on the consumption rate of freshwater and estuarine fish for the adult population from 1994-1996 CSFII data (EPA-820-F-15-001). While the fish consumption calculated by the NHANES study is representative of the population of the United States, DEP had a fish consumption study conducted by Responsive Management in 2008 which specifically studied West Virginia residents’ fish consumption (Responsive Management 2008). The survey was conducted with questions developed from the direction and recommendations of EPA and the Food and Drug Administration (FDA), and surveyed 1,687 WV residents, collecting information from each survey respondent regarding their last 12 months of fish consumption of any kind from any source. Respondents to the study specifically reported having eaten trout, tilapia, catfish/bullhead, bass, panfish, and walleye/sauger. This includes fish purchased from a grocery store, caught fish, and fish eaten in restaurants. This study is technically valid and appropriate for use in the calculation of human health criteria for West Virginia, and EPA encourages the use of state-specific fish consumption data wherever possible. In fact, EPA states in its *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human*



Health that their “four preference hierarchy is: (1) use of local data; (2) use of data reflecting similar geography/population groups; (3) use of data from national surveys; and (4) use of EPA’s default intake rates” (USEPA 2000). The Responsive Management study uses local data to provide a fish consumption rate of 9.9 grams per day specific to the population of West Virginia. This rate represents the 90th percentile of consumption of freshwater fish for West Virginia adults 18 years of age and older. DEP has determined this study to be the most appropriate to represent the fish consumption rates of West Virginians, and it has been incorporated into these revisions to 47 CSR 2.

Bioaccumulation Factors – The proposed criteria incorporate BAFs, where available, as recommended in the EPA human health criteria methodology (USEPA 2000). BAFs take into account the uptake and retention of a chemical by an aquatic organism from all surrounding media. (e.g. water, food, sediment). Criteria that were previously calculated using bioconcentration factors (BCFs) only accounted for direct water contact. The use of BAFs is appropriate in the calculation of human health criteria because aquatic organisms are exposed to pollutants through sources other than only through water contact. In order to account for the variation in bioaccumulation due to the aquatic trophic position of an organism, EPA has recommended that the bioaccumulation factors be determined and applied to three trophic levels of fish. EPA used field measured BAFs and laboratory measured bioconcentration factors, along with octanol-water partition coefficients available from peer-reviewed databases to develop the national BAFs. EPA verified the calculated BAFs using a peer-reviewed model called Estimation Program Interface Suite (EPI Suite) (EPA-820-F-15-001). DEP has evaluated EPA’s bioaccumulation factor sources and has concluded that they are technically valid and appropriate for use in calculation of West Virginia human health criteria because they are based on sound scientifically defensible data and studies.

Reference Dose and Slope Factors – The proposed criteria incorporate updated health risk factors, as recommended by EPA, using the most current toxicity information. EPA’s Integrated Risk Information System (IRIS) is the primary source for reference dose and cancer slope values. For some pollutants EPA has used other sources provided by EPA’s Office of Water, Office of Pesticide Programs and international and state agencies (EPA-820-F-15-001). DEP has evaluated EPA’s reference dose and slope factor sources and methodology for application of these variables and has concluded that they are technically valid and appropriate for use in calculation of West Virginia human health criteria because they are based on sound scientifically defensible data and studies.

Relative Source Contribution – The proposed criteria incorporate Relative Source Contribution (RSC) to reflect chemical-specific exposure. The RSC ranges from 20-80 percent as recommended in EPA’s human health methodology based upon available



exposure data. Use of RSC assigns a percentage of the reference dose's exposure to be attributed to ambient water and fish consumption when other potential exposure sources exist (EPA-820-F-15-001). RSC is an important consideration in the calculation of water quality standards that will be protective of human health since there can be other sources of human exposure to the contaminant which must be taken into consideration.

DEP used EPA's approach of incorporating an RSC of 20 percent in cases where significant potential human exposure sources exist, other than fish and shellfish from inland and nearshore waters and water ingestion, and in cases where adequate scientifically defensible exposure data are not available to justify use of an RSC greater than 20 percent as recommended by EPA. DEP incorporated an RSC of 80 percent in cases where significant potential for human exposure to the pollutant are not expected to exist beyond consumption of fish and shellfish from inland and nearshore waters and water ingestion based on the physical and chemical characteristics of the pollutant, history of its manufacture and specific details of its industrial, agricultural and residential use in the United States and West Virginia.

DEP followed EPA's rationale for use of RSC in the calculation of human health criteria, which is that the objective of water quality criteria is to ensure that an individual's exposure from all sources does not exceed the criteria. Exposures outside of the RSC include, but are not limited to, exposure from ocean fish consumption (not included in the fish consumption rate), non-fish food consumption, dermal exposure and respiratory exposure (EPA-820-F-15-001).

EPA updated the human health criteria to reflect chemical-specific RSCs ranging from 20 to 80 percent following the Exposure Decision Tree approach described in EPA's methodology. EPA recommends inclusion of an RSC when developing human health criteria for threshold non-carcinogens or non-linear carcinogens (EPA-820-F-15-001).

In cases where there is a lack of environmental or exposure data, or both, EPA's Exposure Decision Tree approach results in a recommended RSC of 20 percent. This 20 percent value for the RSC may be replaced where sufficient data are available to develop a scientifically defensible alternative value. When appropriate, if scientific data demonstrating that sources and routes of exposure other than water and fish from inland and nearshore waters are not anticipated for the pollutant in question, the RSC may be raised to 80 percent based on the available data (USEPA 2000a).

For some compounds EPA has identified significant potential sources of human exposure other than inland and nearshore waters and water ingestion. For example, EPA has identified the human exposure sources of Acrolein including but not limited to: cocoa beans, chocolate liquor, souring salted pork, fired potatoes and onions, raw and cooked



turkey, white bread, raw chicken breast, heated animal fats and vegetable oils, roasted coffee and inhalation of cigarette smoke (ASTDR 2007). Due to the significant potential sources of Acrolein exposure, other than fish and shellfish from inland and nearshore waters and water ingestion, EPA recommends use of an RSC of 20 percent for Acrolein (EPA-820-R-15-003).

In cases where adequate data regarding exposure sources are not available to quantitatively characterize exposure from other sources, EPA recommends use of an RSC of 20 percent. One such compound for which EPA recommends an RSC of 20 percent due to lack of adequate exposure data is Acenaphthene (EPA-820-R-15-002).

For some compounds EPA recommends use of an RSC of 80 percent since fish and shellfish from inland and nearshore waters are anticipated to be the significant source and route of exposure to the contaminant. One such compound is 2-Chloronaphthalene which the only U.S. producer stopped manufacturing in 1977 (EPA-820-R-15-088).

DEP used EPA's approach of incorporating an RSC of 20 percent in cases where significant potential human exposure sources exist other than fish and shellfish from inland and nearshore waters and water ingestion and in cases where adequate exposure data are not available. In cases where other significant potential human exposure sources exist, DEP has calculated the proposed human health criteria taking this into consideration making them both technically valid and protective of the designated uses of the waters of the state. In cases where adequate exposure data are not available, it would not be appropriate nor scientifically defensible to assign an RSC greater than 20 percent since it is not known if a higher RSC would be protective of human health and the designated uses of the waters of the state.

DEP incorporated an RSC of 80 percent in cases where significant potential for human exposure to the pollutant are not expected to exist beyond consumption of fish and shellfish from inland and nearshore waters and water ingestion. This RSC is appropriate for these pollutants due to the data that are available regarding human exposure routes and criteria calculated using this RSC will be protective of human health and the designated uses of the waters of the state.

WVCA Comment 3: *WVCA says "WV DEP must recalculate the National Recommended Criteria for these parameters based on West Virginia's fish consumption study.*

DEP Response: As stated in the previous response, DEP had a fish consumption study conducted by Responsive Management in 2008 which specifically studied West Virginia residents' fish consumption (Responsive Management 2008). DEP has determined this



study to be the most appropriate to represent the fish consumption rates of West Virginians, and it has been incorporated into these revisions to 47 CSR 2.

WVCA Comment 4: *WVCA states that “WV DEP did not consider the potential cost to NPDES permittees facing water quality-based effluent limits for certain parameters that might be orders of magnitude lower than those based on current water quality criteria.”*

DEP Response: In regards to the request that DEP do a cost impact analysis regarding how the regulated community would be affected when the revised criteria are implemented, DEP does not possess the authority from the West Virginia Legislature to evaluate potential economic impacts of water quality standards to individual permit holders. Economic impact is not listed in W. Va. Code §22-11-7(b) among the factors DEP may consider in developing water quality standards. Rather, §22-11-7(b) expressly prohibits DEP from specifying “the design of equipment, type of construction or particular method which a person shall use to reduce the discharge of a pollutant.” DEP is tasked instead to propose rules which present standards of water quality which “protect the public health and welfare, wildlife, fish and aquatic life and the present and prospective future uses of the water for domestic, agricultural, industrial, recreational, scenic and other legitimate beneficial uses thereof” (W.Va. Code §22-11-7b(c)).

In regards specifically to the requirement that all rules include a fiscal note “and a statement of the economic impact of the rule on the state or its residents,” notwithstanding whatever interpretation is given the cited language, the DEP does not have the authority to decide what information must be included in a fiscal note for rules. Rather, the Secretary of State’s office and the Legislative Rulemaking Review Committee (LRMRC) are responsible for designing the fiscal note form and specifying its contents. The Secretary of State and the LRMRC use the same form as is used by the Legislature for the passage of legislation. DEP has used the appropriate form and the form does not include any requirement for conducting the research necessary for a full cost impact analysis of the economic impact upon dischargers. It only requires the agency to provide a clear and concise statement of potential economic impacts.

Additionally, DEP does allow for relief when dischargers are unable to meet West Virginia’s standards of water quality due to adverse economic and social impact. As such, dischargers may apply to DEP for a water quality standards variance or use removal, following application and hearing, as provided in 46 CSR 6. The applicant supplies required information to DEP detailing the “adverse economic and social impact” which precludes attainment of the designated use, and would establish a variance term during which the highest attainable condition, as opposed to the water quality criterion concentration, would be met.



Commenter: West Virginia Manufacturers Association (Comments pages 50-53)

WVMA Comment 1: *WVMA cites the WV Legislature change to §22-11-7b(c); specifically, “the Secretary may allow mixing zones to overlap, but not to go beyond the point one half mile upstream of a public water supply,” but suggests that DEP’s proposed language for Paragraph 5.2.h.5 is more narrow than the statutory revision allows. WVMA suggests leaving Paragraph 5.2.h.5 as it is currently in the rule, but amending Subdivision 5.2.j to allow a waiver of the requirements of Paragraph 5.2.h.5.*

DEP Response: Please see DEP response to AEP Comment 1.

WVMA Comment 2: *WVMA applauds DEP for incorporating the change made to §22-11-7b(c) by WV Legislature to calculate permit limits for human health criteria by using harmonic mean flow.*

DEP Response: DEP thanks WVMA for its comment.

WVMA Comment 3: *WVMA cites Responsive Management 2008 Survey of West Virginia Residents’ Consumption of Fish as argument that “our state’s residents consume less fish than the national average,” suggesting DEP use this study for fish consumption rate in human health criteria calculation. WVMA also says “the physical characteristics of West Virginians should also be taken into account in developing human health criteria,” citing the WV DHHR Obesity Report from 2011 as concluding “the average West Virginian adult male weighs 202.1 pounds.” WVMA further suggests that “EPA’s assumption that 3 liters of untreated surface water are ingested daily does not realistically represent West Virginians’ drinking water consumption.”*

DEP Response: Please see DEP response to WVCA Comment 2. Additionally, in response to WVMA’s comment regarding the WV DHHR Obesity Report from 2011, which reports Average Weight in Pounds for adult men 18 and over at 202.1, it also reports average weight in pounds for adult women 18 and over at 165.2. West Virginia would be remiss to make criteria which were protective for adult men but not women. DEP agrees with the use of the NHANES study reports that the “mean body weight for all adults (male and female all age groups) combined” is 80 kilograms (176 lbs). DEP has extensively evaluated the methodology of the NHANES study and has concluded that the derived human body weight is representative of the population of the United States and is therefore technically valid and appropriate for use in the calculation of human health criteria for West Virginia.



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WVMA Comment 4: *WVMA supports the changes to Subsection 8.5 to allow development of a site-specific criterion for copper using the EPA’s biotic ligand model, and commends DEP for making this change.*

DEP Response: DEP thanks WVMA for its comment.

WVMA Comment 5: *WVMA urges DEP to undertake a fiscal analysis before finalizing this triennial review.*

DEP Response: Please see DEP response to WVCA Comment 4.

Commenters: Aileen Curfman (Comments page 54)

Comment 1: *Regarding harmonic mean flow, Ms. Curfman expresses “as a West Virginian I am offended that my state government would allow a lower standard and place me at greater risk of coming in contact with toxic amounts of water pollutants.”*

DEP Response: Please see DEP response to WVRC Comment 4.

Comment 2: *Ms. Curfman states “When mixing zones overlap, larger amounts of effluents may be present. Interactions also may occur between different pollutants. Human health may be adversely affected. The WV Water Quality Standards should require that any proposed overlapping of mixing zones would be evaluated for these hazards. If these zones are allowed, the Standards should require signs warning of potentially high levels of pollutants. The signs should explain that people could be harmed by coming into contact with the water, or by eating fish from it. The signs should include highly visible graphics for recreationists.”*

DEP Response: Please see DEP response to WVRC Comment 1.

Commenter: April Keating (Comments pages 55-56)

Comment: *Ms. Keating states “The WV DEP must always remember its goal of protecting the environment. The DEP has a duty to keep the environment safe. Relaxing WQ standards is not in line with this goal, especially because many of our industries are especially hard on the air and water, public health, and sustainable economic development.”*

DEP Response: Thank you for your comment. DEP recognizes the importance of our mission of protecting the environment. Please see DEP response to OVEC Comment 4.



Commenter: Barbara Daniels (Comments page 57)

Comment 1: *Ms. Daniels states “West Virginia code states that no pollutants are to be allowed in streams. Harmonic Mean Flow is therefore now illegally the criteria for where pollutants may be dumped. When a stream is nearly dry, it doesn’t matter how much water was there last spring, it won’t safely dilute pollutants now.”*

DEP Response: DEP’s proposed change in regards to harmonic mean is consistent with Legislative revisions made to W. Va. Code §22-11-7b(c) which state “for implementing human health criteria for the protection of drinking water, the Secretary shall calculate permit limits using the harmonic mean flow.”

Comment 2: *Ms. Daniels states “The 56 known carcinogens on the DEP parameters list do not include all the carcinogens likely to be found in the WV streams. While there are many coal-slurry chemicals on the DEP list, those protected from investigation by patents--and thus not known to be carcinogens--are not. High-volume hydrofracturing (hhf) waste chemicals are also likely to be in West Virginia streams and very few are on the WV DEP parameters list.”*

DEP Response: Please see DEP response to WVRC Comment 6.

Comment 3: *Ms. Daniels states “With gas pipelines to LNG export terminals on the way to completion, fracking and its present enormous waste problem are expected to rise exponentially. How will we protect our water then?”*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Commenter: Cindy Rank (Comments pages 58-59)

Comment 1: *Ms. Rank states “Evaluating the cumulative and synergistic effects of pollutants in the proposed overlap zone is essential for the protection of human health and must be a condition of the Secretary’s approval of overlapping mixing zones.”*

DEP Response: Please see DEP response to WVRC Comment 1.



Comment 2: *Ms. Rank states “We are not served well by this newer method (harmonic mean) of calculating average flow as a basis for setting permissible levels of pollutants, nor are short-term exposure risks for some specific pollutants adequately addressed. These regulations must include discretion for WV DEP to use more protective methods for calculating discharge limits.”*

DEP Response: Please see DEP responses to WVRC Comments 1 and 4.

Comment 3: *Ms. Rank states “EPA has recommended upgraded human health criteria for 94 pollutants and all 94 should be adopted as has been done in neighboring states.”*

DEP Response: Please see DEP response to WVRC Comment 6.

Commenter: Donald Briggs (Comments pages 60-61)

Comment 1: *Mr. Briggs expresses “WVDEP should adopt all 94 criteria published by the EPA’s updated National Recommended Water Quality Criteria, reflecting the latest scientific information.”*

DEP Response: Please see DEP response to WVRC Comment 6.

Comment 2: *Mr. Briggs states “The Secretary should have the ability to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.”*

DEP Response: Please see DEP response to WVRC Comment 4.

Comment 3: *Mr. Briggs requests that language be added to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.*

DEP Response: Please see DEP response to WVRC Comment 1.

Comment 4: *Mr. Briggs states that DEP should “Specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts.*



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The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.”

DEP Response: Please see response to WVRC Comment 3.

Commenter: IDEXX (Comments pages 41-45)

Comment: *IDEXX states “We recommend amending the Category A and Category C bacteria indicator from fecal coliform to Escherichia coli (E. coli), listed at Appendix E, Table 1 8.13, applied Statewide because E. coli are better indicators for fecal contamination versus fecal coliforms.”*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Commenter: Michael and Carrie Kline (Comments page 64)

Comment: *Mr. and Ms. Kline state “Thank you for spearheading the triennial review of water quality standards. There is nothing more important than clean water to our efforts to fight depopulation in WV. We are very concerned about any threat to our states’ water, including mountaintop removal mining, gas pipelines, hydraulic fracturing and the Appalachian Gas Storage Hub. We need tight standards and tight reviews with adequate numbers of inspectors. We also question the regulation that ensures DEP staff have worked in industry prior to working for the public good. We consider this too intimate a relationship with industry for the public welfare.”*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Commenter: Pamela Moe (Comments page 65)

Comment 1: *Ms. Moe comments “Please adopt all 94 criteria to proactively protect human health.”*

DEP Response: Please see DEP response to WVRC Comment 6.



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Comment 2: Ms. Moe expresses *“Please do not utilize the harmonic mean to calculate discharge limits -- instead utilizing a more protective methodology to limit and protect against the pollutants and toxins from discharges.”*

DEP Response: Please see DEP response to WVRC Comment 4.

Comment 3: Ms. Moe states *“Please require a close look and evaluations of interactions and cumulative impacts of varying pollutants and their potentially harmful effects to our waters and human health.”*

DEP Response: Please see DEP response to WVRC Comment 1.

Comment 4: Ms. Moe further states *“please...keep us all notified as we utilize our outstanding waters with signage letting us know of any waterbody that contains pollutants that may be harmful.”*

DEP Response: Please see DEP response to WVRC Comment 3.

Commenter: Philip Price (Comments page 66)

Comment 1: Regarding mixing zones, Mr. Price states *“These zones will contain hazardous concentrations of pollutants. To prevent accidental human exposures, these zones must be clearly identified with signs visible both from the water and the shoreline!”*

DEP Response: Please see DEP response to WVRC Comment 3.

Comment 2: Mr. Price states *“I understand these rule revisions are being made to “bring WV standards in line with nationally recommended water quality criteria”. The rule introduction also states “no economic impacts on the state or its residents”. This rule change must bring economic benefits to commercial and industrial interests, given their strong support... in the face of the public's opposition.”*

DEP Response: Please see DEP response to WVCA Comment 4.

Comment 3: Mr. Price states *“Section 3.2 (& 3.2.h, 3.2.i) states that no industrial wastes shall “require an unreasonable degree of treatment for the production of potable water” and no “radiological exposure”. Hydraulic Fracturing practices in WV frequently release brines and radiological wastes to surface waters. Conventional water treatment plants cannot remove ionic brine and most radiologicals from drinking water. Given the DEP rule exceptions generally granted*



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Oil and Gas operations, what assurances are there that WV's drinking water supplies and surface waters will be protected?"

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Comment 4: *Mr. Price states "Section 4.1.b seems to state that Tier 2 Protection can be waived by the DEP to accommodate "important economic development". Water quality sufficient for drinking water supply would not be protected, only for fish and recreation uses. Even with the legislature's "Antidegradation Implementation, this seems to put economic interests above Public Health." Mr. Price further states "Section 5.2.b states that Initial Mixing Dilution Zones are established "at the discretion of the secretary". This seems to avoid public notice or input from affected parties."*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Comment 5: *Mr. Price states "Section 5.2.d states Mixing Zones shall not overlap "water supply intakes or bathing areas". This will be impossible to verify, unless Mixing Zones are posted with signage."*

DEP Response: Please see DEP response to WVRC Comment 3.

Commenter: S. Vance (Comments pages 67-68)

Comment: *Ms. Vance makes comments concerning the Mountain Valley Pipeline project urging DEP to "please reconsider every single one of the MVP permit creek crossings" and to "make the legislature require them to hire more inspectors for your creek protection".*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Commenter: Tom Rhule (Comments pages 69-73)

Comment 1: *Mr. Rhule recommends that EPA require the State of WV to discontinue the Source Water Assessment & Protection Program ("SWAPP") nondisclosure agreements.*



DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Comment 2: *Mr. Rhule states “the State of West Virginia has never closed the environmental protection exemptions that Congress passed with regards to oil & gas industry drilling, exploration and production. I recommend that EPA force the State of WV to either close those loopholes, or rescind West Virginia's right to regulate ANY industry pursuant to those statutes.”*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Comment 3: *Mr. Rhule states “I recommend that the EPA require WV DEP halt all horizontal drilling permitting until and unless it begins measuring, classifying, handling, storing, and disposing the waste it produces so that it no longer threatens our water.”*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.

Commenter: Virginia Jarrell (Comments page 74)

Comment: *Ms. Jarrell states “It would seem to me its a obvious benefit for everyone to protect and have strong policies in place for keeping a States water supply heathy. Protecting water not only keeps people healthy and the environment clean, wildlife, tourism etc but in the long run practically keeps the cost of health care down. The cost of fines and clean up from pollution spills is lessened. Does it not make sense to protect West Virginias water not only for the benefit of local communities but for the financial and reputation of all companies involved and Government offices. It would seem to me you are cutting corners in the short term but causing yourself and others a bigger cost in the long term. This does not seem a very good policy to me.”*

DEP Response: DEP appreciates the comment; however, the comment involves language that is beyond the scope of proposed revisions and, therefore, it would be inappropriate at this time for the agency to make any changes to the rule related to this issue.



Commenter: Wayne Keplinger (Comments page 75)

Comment: *Mr. Keplinger's comments are similar in form and substance to comments made by the West Virginia Rivers Coalition.*

DEP Response: Please see DEP responses to WVRC.

Commenters: (Comments pages 75-379) Letters similar in form and content were submitted by the following people: Aaron Llewellyn, Alexya Jo Skibo, Alice Vance, Amanda Chenowith, Amanda Cox, Amber Griffith, Andrew Rhodes, Andrew Wadsworth, Angela Hughes, Anna Jasiukiewicz, Anna Mary Walsh, Anne Chopyak, Barbara Brown, Barbara Frierson, Barbara Grigg, Barbara Klinger, Becky Park, Ben Badger, Bert Lustig, Betsy Rhodes, Bill Franz, Bill Funk, Bob Bousquet, Bonnie Pielach, Brad Smith, Brenda Powell, Brenda Wilson, Bret Rosenblum, Brian Deweese, Brian O'Donnell, Bruce Musser, Carissa Herman, Carla Seamonds, Carol Nix, Carol Workman, Carole Williams, Carolyn Thomas, Casey Kaemerer, Catherine Grant, Celia Buchanan, Charles Walbridge, Christine Linton, Christine Olson, Christine Stephens, Christopher Fetta, Christy Gibson, Chuck Nelson, Colleen Anderson, Connie Sayles, Copley Smoak, Cynthia Ellis, D.K. Anestos, Daniel Pratte, Daniel Taylor, Danielle Snidow, Dave Ruediger, David Billups, David Bott, David Brisell, David Childers, David Kirkpatrick, David Lillard, David Long, David Young, Deb Vensel, Debbie Naeter, Deborah Smith, Debra Hamilton, Debra Jarrell, Dede Cassis, Diana Bohn, Diana Mazzella, Dianna Greenhalgh, Dianne Douglas, Donna Becher, Donna Broslawsky, D'Onofrio D'Onofrio, Doug Evans, Doug Krause, Eddie Fletcher, Edward Thornton, Elaine Eudy, Elaine Komarow, Elaine Wine, Elizabeth Rhodes, Elizabeth Watts White, Ellen Lachewitz, Ellis Woodward, Eillen Sparks, Emily Carlson, Eric Engle, Esther Murphy, Felice Cohen, Frances Marshall, Francis Slider, Frank Beller, Frederick Ripley, Gabrielle Fry, Gallaher Gallaher, Garvey Garvey, Gavin Ward, George Little, Ginny Pendas, Giulia Mannarino, Haid Haid, Harshbarger Harshbarger, Hayley Lindsey, Herb Myers, Holly Cloonan, Iris Hunt, J.B. Witten, J.T. Arbogast, Jack Stansfield, Jacob Ott, James Bullard, James Mulcare, James Shreves, James Wood, Jane Butler, Jane Morningstar, Jane Seward, Jane Thomas, Janet Keating, Janet Lenox, Jarrett Cloud, Javier Rivera, Jeff Feldman, Jeff Iliff, Jenni Kovich, Jennifer Dotson, Jennifer Edelen, Jerry Bowles, Jerry Carson, Jerry Rivers, Jim Kinnison, Jo Strough, Jody Ross, Joe Stanley, Joey Aloï, Johanna Flythe, John Brady, John Christensen, John Doyle, John Geelhaar, John Henry, John Pasqua, John Rossbach, Jon DeBoer, Jose De Arteaga, Joseph Spurgas, Josh Posey, Joshua Kucharski, Judith Clister, Judy Hamilton, K. Scott, Kali Harsh, Karen Arbogast, Karen Fields, Karen Kish, Karen Scalf, Karen Yarnell, Kari Harsh, Kathryn Herlihy, Kathy Dewitt, Kathy McMurray, Kati Holland, Katie Donnelly, Keith Lilly, Kelly Campbell, Kenneth Gfroerer, Kimberly Dilts, Kimberly Wiley, Kurt Ramos, Larry & Evelyn Dadisman, Larry Snidow, Larry Thomas, Laura Dulaney, Laurie Methven, Laurie Townsend, Lawrence Orr, Lenore Reeves, Leslee McCarty, Linda Jones, Linda Reeves,



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Lleona Chew, Lloyd Aultman-Moore, Logan Bockrath, Lucy Duff, Lynn Yellott, M. Miller, Madison Ball, Margaret Meeker, Marianne Deaver, Mark Buchanan, Mark Korman, Mark Leonard, Marsha Wells, Martha Spencer, Martha Walker, Marvin Strathman, Mary Ellen Seehafer, Mary Hawkins, Mary L., Mary Shamburg, Mauricio Carvajal, Meade Winters, Megan Hamilton, Melanie Climis, Melissa Armstrong, Melissa McCool, Merri Morgan, Micahel Klausling, Micahel Ross, Michele Baranaskas, Michelle Pancake, Miriam Miller, Nancy Bevins, Nancy Vickers, Nancy Ward, Ned Savage, Nicole Jones, Nora Davidson, Olga Gioulis, Pam Faulkner, Pam Leonard, Pamela Ruediger, Pat DeFrancis, Pat Hamlin, Patricia Vazquez, Patrick Pelletier, Paul Kahne, Paula Mann, Penny Manion, Peter Schumacher, Phyllis Chavez, Rachael Pappano, Raquel Sosnowski, Rebecca Berlant, Regina Hendrix, Rhonda Marrone, Robert A. Mertz, Robert Stanley, Robin Blakeman, Robin Wright, Rosmarie Jowdy, Ruth Smith, Sally Egan, Salt Salt, Sandra Levesque, Sara Anderson, Sara Carley-Peña, Sarah Bonnett, Sarah Hafer, Sarah Hinnant, Sarita Dotson, Sherry Sturman, Skip Flynn, Stacey Wolfe, Stephanie Hysmith, Steve Malafy, Steven Grigsby, Steven Runfola, Sue E. Dean, Susan Cleaver, Susan Hamann, Susan Hathaway, Susan Julian, Susan Kelley, Susan Rogers Rosenblum, Susan VanMeter, Suzanne Feldman, Suzanne Kruger, Tamara McCready, Tammy Young, Taralyn D'Eramo, Terence Hunt, Teresa Parcell, Terry Webb, Therese DeBing, Thoams Johnson, Tia Triplett, Timothy Simmons, Tom Epling, Tom France, Tom Harris, Tom Hoffman, Tom Nagle, Tonya Stiffler, Tracy Asbury, Travis Stimeling, Tricia Ball, Vanessa Reaves, Wiley McIntyre, and Wolfgang Baudler.

Comment: *These comments are similar in form and substance to comments made by the West Virginia Rivers Coalition et al.*

DEP Response: Please see DEP response to comments made by WVRC.



Public Hearing July 10, 2018 – Oral Comments DEP Response

Commenter: Sabrina Sharder

Comment: *Ms. Sharder states “To cut the recommended criteria for the water quality safety standards is inhumane and unjust. Taking away water quality safety standards would just kill us faster.”*

DEP Response: Please see DEP response to OVEC Comment 4.

Commenter: Karen Ireland, WV Environmental Council

Comment 1: *Ms. Ireland requests that DEP “include some kind of discretion in the rule to allow a more protective method of calculation for discharge limits of pollutants that are harmful to human health through acute exposure.”*

DEP Response: Please see DEP response to WVRC Comment 4.

Comment 2: *Regarding mixing zones, Ms. Ireland states “please add language to the rule that requires the evaluation of potential human health effects caused by cumulative effects and interactions between different pollutants prior to the approval of any overlapping mixing zone. Further, we ask that signage be required to warn the public that water in these zones contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have negative and severe health impacts.”*

DEP Response: Please see DEP response to WVRC Comment 1.

Comment 3: *Ms. Ireland states “Please adopt all of the EPA’s recommended water quality criteria for all 94, not 56, in order to protect human health.”*

DEP Response: Please see DEP response to WVRC Comment 6.



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Commenter: Dustin White, Ohio Valley Environmental Coalition

Comment: *Mr. White states “Why WVDEP will take actions to further deregulate and weaken our water quality standards is really beyond me. Do the people who work in this building not realize that they too are citizens of this state and are impacted by these standards as well? And why are they so complacent in deciding with industry to weaken these standards that certainly put profits over people?”*

DEP Response: Please see DEP response to OVEC Comment 4.

Commenter: Stephanie Hysmith

Comment: *Ms. Hysmith states “Why would DEP not test at all for all 94 possible pollutants? Please do your best for West Virginia’s water.”*

DEP Response: Please see DEP response to WVRC Comment 6.

Commenter: Angie Rosser, WV Rivers Coalition

Comment 1: *Ms. Rosser states “We encourage the DEP to seriously consider adopting all 94 of the human health criteria updates recommended by EPA so that we don’t have to keep being reactive as a state government to problems that arise, that we can be proactive in protecting our residents here in West Virginia like they are in Kentucky and Pennsylvania.”*

DEP Response: Please see DEP response to WVRC Comment 6.

Comment 2: *Ms. Rosser states “We’re embarking on this experiment around overlapping mixing zones and what will happen when we start mixing contaminants together? And as the EPA has warned this agency, we need to know how they plan to account for the cumulative effects, the synergistic effects, the additive effects that happens when you start --- start blending this toxic mix. So we would like to hear from the agency how they plan to take that into account.”*

DEP Response: Please see DEP response to WVRC Comment 1.

Comment: *Regarding overlapping mixing zones, Ms. Rosser states “we want something very visual that gives warning about health effects and lets people know that there are exceedances of safe levels of human health criteria and that is not a safe place to be in direct contact with water.”*



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DEP Response 3: Please see DEP response to WVRC Comment 3.

Commenter: Lewis Baker, WV Rural Water Association

Comment 1: *Regarding harmonic mean, Mr. Baker states “you probably ought to have lower criteria if it’s going to be exceeded the 107 weeks out of 520 (versus one out of 520 with 7Q10).”*

DEP Response: Please see DEP response to WVRC Comment 4.

Comment 2: *Mr. Baker expresses “WVDEP should take into consideration the regulatory limits drinking water utilities must meet while revising the water quality standards for our state sources of drinking water.”*

DEP Response: The proposed criteria are designed to be protective of the designated uses of the waters of the state as defined in 47 CSR 2, and were derived for that purpose. The water quality standards being revised are taken from EPA’s recommended criteria which are developed to protect the drinking water use. As stated in the National Recommended Water Quality Criteria Human Health Criteria Table, “human health ambient water quality criteria represent specific levels of chemicals or conditions in a water body that are not expected to cause adverse effects to human health.”

Comment 3: *Mr. Baker states “There are about three dozen chemicals EPA has recommended that West Virginia chose not to adopt. DEP should adopt EPA’s recommended criteria or else set criteria at half of the drinking water standard for a particular contaminant, whichever’s more protective, or else give a sound reason for not doing either one.”*

DEP Response: Please see DEP response to WVRC Comment 6.



References

- NHANES 2003-2010 Report – Estimated Fish Consumption Rates for the U.S. Population and Selected Subpopulations, Final Report. April 2014. EPA-820-R-14-002.
<https://www.epa.gov/sites/production/files/2015-01/documents/fish-consumption-rates-2014.pdf>
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https://dep.wv.gov/WWE/Programs/wqs/Documents/Triennial%20Review/May%2018%20c%202009/17158_Fish_Consumption_Report_2008.pdf
- USEPA. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. 2000. EPA-822-B-00-004. U.S. Environmental Protection Agency, Office of Water, Office of Science and Technology, Washington, DC.
http://water.epa.gov/scitech/swguidance/standards/upload/2005_05_06_criteria_human_health_method_complete.pdf
- USEPA. EPA Response to Scientific Views from the Public on Draft Updated National Recommended Water Quality Criteria for the Protection of Human Health. June 2014. (Docket ID No. EPA_HQ_OW_2014-0135).
- West Virginia Department of Health and Human Resources (DHHR). General Advisories 2018 WV Statewide Consumption Advisories. 2018.
http://www.wvdhhr.org/fish/Current_Advisories.asp
- USEPA. Human Health Ambient Water Quality Criteria: 2015 Update. EPA-820-F-15-001. June 2015.
- USEPA. Update of Human Health Ambient Water Quality Criteria: Acenaphthene 83-32-9. EPA-820-R-15-002. June 2015
- USEPA. Update of Human Health Ambient Water Quality Criteria: Acrolein 107-02-8 and 2-Chloronaphthalene 91-58-7. EPA-820-R-15-003. June 2015



B. Written and Oral Comments

Oral comments were accepted at a public hearing held at DEP Headquarters in Charleston, WV on Tuesday, July 10, 2018, from 6-8PM. Fourteen people signed a registration sheet, and six people spoke at the hearing. Written comments were also accepted by mail and by email to Water Quality Standards program staff. A total of 379 pages of comments were received during the public comment period. Comments were accepted until the conclusion of the public hearing on July 10; comments received post-marked by that date were also accepted.

This section includes:

Written Comments on revisions to 47 CSR 2

Transcript & Sign-in sheet from public hearing

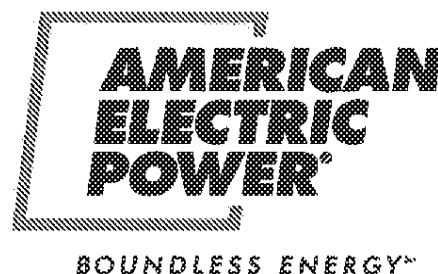


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Written Comments on revisions to 47 CSR 2

Laura Cooper
Water Quality Standards, DWWWM
WV Department of Environmental Protection
601 57th Street
Charleston, WV 25304

9 July 2018



**RE: American Electric Power Comments on Proposed
Revisions to WV WQS, 47CSR 2**

Dear Ms. Cooper:

American Electric Power (AEP) provides the following comments on WV DEP's proposed changes to 47 CSR 2, Requirements Governing Water Quality Standards. AEP owns and operates both coal-fired and hydroelectric generating facilities in West Virginia. AEP's subsidiary based in Charleston, WV (Appalachian Power Company) provides reliable electricity to about 1 million customers in West Virginia, Virginia, and Tennessee. As the AEP generating facilities in West Virginia are regulated to maintain compliance with requirements in 47 CSR 2 via the NPDES program, we have an interest in the recently proposed revisions to the water quality standards.

A. Overlapping mixing zones

In 2017 the West Virginia Legislature adopted a revision to W.Va. Code §22-11-7b(c) which provided, in part, that "the Secretary may allow mixing zones to overlap, but not to go beyond the point one half mile upstream of a public water supply". As proposed by DEP, this statutory change would be incorporated into 47 CSR 2-5.2h.5. The proposed new language in this section is "...except that the secretary may allow mixing zones for human health criteria to overlap, if the overlapping mixing zones comply with all guidelines and conditions of this subsection."

In general AEP supports the proposed new language. As wastewater limitations in NPDES permits are issued based on conservative deterministic assumptions (e.g., usage of a low-flow statistic in wasteload allocation modeling), the presence of overlapping mixing zones – where demonstrated and approved – will not cause potential adverse effects to human health. The proposed new language, however, suggests that overlapping mixing zones are still subject to the other limitations on approved mixing zones (i.e., those delineated in subsection 5.2.e and paragraph 5.2.h.2). The statutory language is broader, allowing mixing zones to overlap in all circumstances, except for one-half mile upstream of a drinking water intake.

We recommend that DEP leave paragraph 5.2.h.5 as is, and amend subdivision 5.2.j, which provides exceptions to the limitations on mixing zones

The secretary may waive the requirements of subdivision 5.2.e, paragraph 5.2.h.2, and paragraph 5.2.h.5 for human health mixing zones, if a discharger provides an acceptable demonstration of:
(recommended addition in bold lettering)

By making this change, DEP would clarify that one or more of the 3-dimensional limitations on mixing zones do not apply if a proper technical demonstration is reviewed and approved by the agency.

B. Methodologies for Site-Specific Criteria

DEP has proposed to delete a portion of existing section 8.5 (methodology for site-specific numeric criteria) and replace this text with new subsections 8.5.a and 8.5.b. Subsection 8.5.a clarifies that:

- A site-specific aquatic life criterion may be established by using a Water Effects Ratio (WER) study pursuant to USEPA's 1994 WER guidance.
- For copper, a site-specific criterion may be established using a Biotic Ligand Model (BLM) analysis in accordance with US EPA's 2007 copper BLM guidance.

In general AEP does not have any objection to this proposed change. We do believe, however, that a site-specific criterion for copper be allowed using methods other than the BLM. Other methods include a WER study, the recalculation procedure, or the resident species procedure (as discussed in US EPA's Water Quality Standards Handbook; <https://www.epa.gov/wqs-tech/water-quality-standards-handbook>). A BLM-based site-specific criterion for copper is **predictive** in nature regarding potential toxicity whereas a WER study is **confirmatory** (standard test organisms are tested using site water). The proposed new subdivision 8.5.b simply states that methods other than those listed in subsection 8.5.a may be used "so long as the applicant follows the requirements for revision of water quality standards set forth in 46CSR6". If it is DEP's intent that a site-specific criterion for copper using a method *other than* the BLM would be allowed in this proposed addition, we recommend that such clarifying language be added to subsection 8.5.a.

AEP would like to note that the US EPA 2007 copper BLM guidance manual does not specify the number of sampling events required to obtain a final BLM value that minimizes the effect of analytical data variability on all parameters required to be measured. Thus, a permittee would likely need to discuss with DEP a suitable number of sampling locations and sampling events for a particular study.

C. Human health criteria

DEP has proposed to adopt several new, revised human health water quality criteria (47 CSR 2 Appendix E, Table 1). These criteria are a subset of revised human health criteria that US EPA adopted in 2015 (<https://www.epa.gov/sites/production/files/2015-10/documents/comparison-of-epa-s-2015-final-updated-human-health-awqc-and-previous-awqc-june-2015.pdf>). Some of the proposed new criteria are more stringent than US EPA's previously-recommended criteria whereas other criteria are less stringent. Almost all of the proposed new criteria represent non-polar organic compounds; revised criteria for trace metals were not developed by US EPA.

AEP has several concerns with the proposed criteria revisions, and these are listed below:

1. WV DEP made no attempt to evaluate the various criteria input variables to determine if: a) the inputs were technically valid and not over-protective; and 2) the inputs were appropriate for implementation in West Virginia. While US EPA - in developing ambient water quality criteria - does not consider important implementation factors such as compliance costs, feasibility of treatment technologies, or ambient water exceedances, DEP must evaluate these at least to some degree. Thus, AEP recommends that DEP conduct a cost impact analysis regarding how the regulated community would be affected when these revised criteria are implemented in NPDES permits. In the "Notice of Public Comment" form that announces the public hearing scheduled for July 10, DEP states inexplicably there will be *no fiscal impact* to West Virginia residents or businesses.
2. Comments on input variables – relative source contribution

For most of the revised US EPA criteria, a default relative source contribution (RSC) value of 0.2 is used. The RSC is that portion of a non-carcinogen chemical's reference dose that is attributable to the consumption of fish and ingestion of water. Based on US EPA guidance (US EPA, 2000) RSC values should range from 20% to 80%. US EPA (2004) states that the purpose of the RSC "...is to ensure that the level of a chemical allowed by a criterion.....when combined with other identified sources of exposure *common to the population of concern*, will not result in exposures that exceed the RFD (reference dose; bold lettering added). Thus, for the vast majority of revised US EPA human health criteria, a RSC value of 20% is applied. Such a value is overly conservative as it assumes that, of the total exposure a person has to a particular chemical during an assumed 70-year lifespan, only 20% of that route of exposure is due to fish consumption and water ingestion. The remaining exposure apportionments (80%) are not defined by US EPA for any specific chemical. The only other exposure routes, in theory, are via inhalation and dermal uptake. AEP believes that fish consumption and water ingestion is the dominant route of exposure to the general public.

Because RSC values are included in the denominator of human health criteria derivation equations, relatively lower RSC values will decrease (make more stringent) the resulting criteria value.

AEP recommends that DEP apply a RSC value of 0.5 as a default value for all proposed new human health criteria. Potential changes to this default value can be proposed by any stakeholder assuming the proposed change is scientifically defensible. A default value of 0.5 removes any systematic bias regarding the development of criteria that are consistently under-protective, or consistently over-protective.

3. Comments on input variables – fish consumption rate

Within the revised 2015 human health criteria, US EPA set a default fish consumption rate of 22 g/day for all of the chemicals evaluated. The value represents the 90th percentile consumption rate of fish from inland and near-shore waters for the US adult population 21 years of age and older, based on NHANES (National Health and Nutrition Examination Survey) data collected from 2003 to 2010. The usage of national fish consumption survey results would be appropriate if there were no West Virginia-specific fish consumption survey data. However, in 2008 a study conducted by the firm Responsive Management (on behalf of the West Virginia Department of Natural Resources) was released to the general public. The firm interviewed about 1,700 West Virginia residents 18 years old and older to assess the pattern of fish consumption. The 90th percentile daily fish consumption rate was calculated to be about 9.5 g/day.

US EPA (2000) states that fish consumption surveys at the local or state level have more relevance and accuracy than usage of US EPA default values. AEP recommends that DEP remove the US EPA-based default consumption rate and replace this with the upper level of fish consumption rates that are based on surveys of West Virginia residents (9.5 g/day).

4. Compound effect of overly-conservative input variables

The current US EPA deterministic approach in calculating human health criteria incorporates a multitude of default (in many cases conservative) assumptions. For each variable input for criterion development, a single value from a sample distribution of values in a population is selected. Usually this single value represents an upper percentile of the sample distribution. Thus, by multiplying upper percentile exposure variables together, the overall conservatism is compounded.

US EPA's revised human health criteria use such upper percentile or arbitrarily conservative input variables. A 90th percentile value was chosen for the default

drinking water intake and fish consumption rates. Reference dose values are often calculated by using uncertainty factors of 3,000 to 5,000 after a safe lifetime exposure level has been delineated. Lastly, as discussed above, an overly-conservative RSC value is applied to all of the criteria. The end result can be the calculation of unrealistically stringent criteria that are based on mathematical extreme (rather than potentially likely) exposure assumptions (Tatum et al., 2015). US EPA's guidance on the derivation of human health criteria (US EPA, 2000) clearly does not prohibit – nor discourages - any state or tribe to select alternative statistical measures such as median or average values. AEP strongly urges DEP to thoughtfully evaluate whether such alternative statistical measures are appropriate for protecting the residents of the state, and preventing pervasive exorbitant compliance costs.

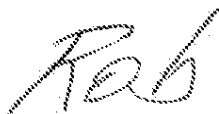
D. References

Tatum, V., P. Wiegand, S. Stratton, J. Louch, E. Ebert, and P. Anderson. 2015. Derivation of human health-based ambient water quality criteria: a consideration of conservatism and protectiveness goals. *Integrated Environmental Assessment and Management* 1: 298 – 305.

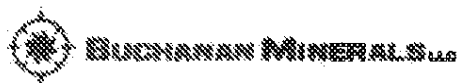
US EPA. 2000. Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health. EPA-822-B-00-004. US EPA Office of Water, Washington, DC.

US EPA. 2004. An examination of EPA risk assessment principles and practices. EPA/100/B-04/001. US EPA Office of the Science Advisor, Washington, DC.

AEP appreciates the opportunity to provide these comments. Please contact me at (614) 716-1237 or via email (rreash@aep.com) if you have any questions on the above.



Rob Reash
Principal Environmental Scientist
Certified Fisheries Professional
American Electric Power – Environmental Services Department
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July 10, 2018

Laura Cooper, Assistant Director
West Virginia Department of Environmental Protection
Division of Water & Waste Management
601 57th Street
Charleston, WV 25304
Via Electronic Mail: Laura.K.Cooper@wv.gov

Re: Public Comment Period on Draft Legislative Rule Revisions to 47 CSR 2- State Water Quality Standards

Dear Ms. Cooper:

Pursuant to the public notice published by the West Virginia Department of Environmental Protection (WV DEP), Buchanan Minerals, LLC offers the following comments regarding the revisions to the state's water quality standards set forth in 47 CSR 2.

Buchanan Minerals, LLC is coal mining company holding ten Article 3 permits and seven Article 11 (NPDES) permits in southern West Virginia. Two additional divisions of the management company, Coronado Coal, hold multiple Article 3 and Article 11 permits throughout central and southern West Virginia. Policies and regulations that affect coal extraction in West Virginia can have a significant impact on our operations and those of

the entire regulated community. Buchanan Minerals, LLC supports efficient and environmentally responsible coal extraction through reasonable and sound state and federal regulation.

As part of the revisions to 47 CS2, WV DEP proposes to adopt fifty-three revised criteria based on the federal Environmental Protection Agency's (EPA) National Recommended Human Health Ambient Criteria for these parameters. This is egregious, considering the struggles WV DEP has endured in the past few years attempting to correct EPA's past mistakes in development of water quality criteria.

At a minimum, WV DEP must recalculate the National Recommended Criteria for these parameters based on West Virginia's fish consumption study. The *Survey of West Virginia Residents' Consumption of Fish*, published in 2008 by Responsive Management (the 2008 Survey) and prepared for the WV DEP, determined that the fish consumption rate for State residents is lower than the national average. WV DEP has utilized the fish consumption rates from the 2008 Survey in the development of methylmercury criteria. WV DEP should recalculate the human health criteria for the fifty-three organic chemicals utilizing the fish consumption rates from the 2008 Survey.

While WV DEP's public notice claims, "No economic impacts on the state or its residents are anticipated", the agency clearly did not consider the potential cost to NPDES permittees facing water quality-based effluent limits for certain parameters that might be orders of magnitude lower than those based on current water quality criteria. The

agency should revise this statement after a careful consideration of the potential compliance costs to the regulated community so the West Virginia Legislature can fully understand the implications of this proposal.

Buchanan Minerals, LLC appreciates the opportunity to provide these comments regarding the revisions to the state's water quality standards.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Ed Fanning", with a stylized flourish at the end.

**Ed Fanning, P.E.
Supervisor Permitting &
Environmental Compliance**



Laura Cooper
601 57th St SE
Charleston, WV 25304

To Ms. Cooper.

It is our understanding that West Virginia's water quality standards for copper are dependent on water hardness as a modifier of bioavailability and, hence, toxicity. While this method acknowledges that water chemistry plays a role in copper bioavailability, relying solely on hardness is an outdated approach. The BLM builds upon this understanding and uses 10 water quality parameters to predict copper bioavailability. Of these parameters, pH and dissolved organic carbon (DOC) have the strongest effect on copper toxicity. The key strength of the BLM is that it accounts for multiple factors—in addition to hardness—that mitigate or exacerbate copper's effect on aquatic life.

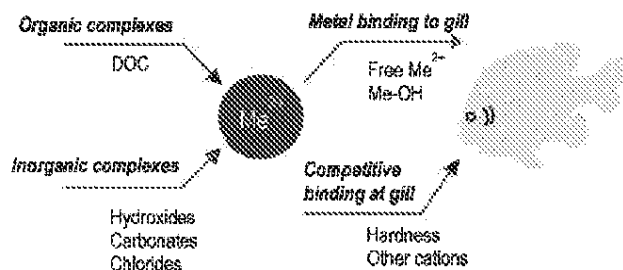


Figure 1: BLM conceptual model for metal (Me^{2+}) complexation and competitive binding, which affect metal bioavailability.

State Summary

The current cancer reports for
cancer.gov

Frühjahrstermin: 19. April 2014
 (13.00 – 14.00 Uhr)

Frequency: three
times a week

There are good reasons why
 recommended by USFA in

1995



How Can the BLM Help?

During the current Triennial Review, we recommend the WVDEP explore whether the BLM could be adopted as an acceptable method for deriving copper water quality criteria in West Virginia. We believe this would provide a number of practical benefits as described below.

Benefits of the Biotic Ligand Model



Aquatic Life Protection Based on Site-specific Data

- Generates protective criteria specific to a water quality condition
- Reduces the need to develop generalized criteria, which may not be protective of all waters in the State, for all times of the year



Consistent with USEPA's Nationally-Recommended Criteria

- Incorporated into USEPA's National Recommended Ambient Water Quality Criteria for Copper in 2007



The BLM is Based on the Best Available Science

- Represents our current understanding of metal toxicity to aquatic organisms, building on over 25 years of scientific research
- Model validated under a wide range of water quality conditions and found to consistently predict toxicity better than outdated hardness-based approaches
- Best method to ensure protection of salmonid fishes from the behavioral or sensory effects of copper



Easy to Use Software

- Software freely available from <http://www.windwardenv.com/biotic-ligand-model/>
- Intuitive user interface and instantaneous results



Helps Identify Waters Where Copper is an Issue

- By better accounting for water chemistry, may more-accurately identify waters with copper impairment, compared to hardness-based methods
- May help prioritize waters needing protection



Potential Cost Savings

- Regulators:
 - Reduce need for TMDL development if a water can be delisted for copper
- Dischargers:
 - May be able to demonstrate compliance with BLM-based instream standards, reducing need for costly treatment/removal systems
 - Less expensive than laboratory water-effects ratio (WER) toxicity testing



How Can the BLM be Implemented in WV?

Adoption of the BLM as an acceptable method for deriving freshwater copper criteria has been consistently growing across the United States and Canada. To date, a total of **31 States and 2 Provinces/Territories** allow the use of the BLM. The map below highlights the status of BLM adoption across North America, but many more States are considering adopting the BLM as part of an upcoming Triennial Review.

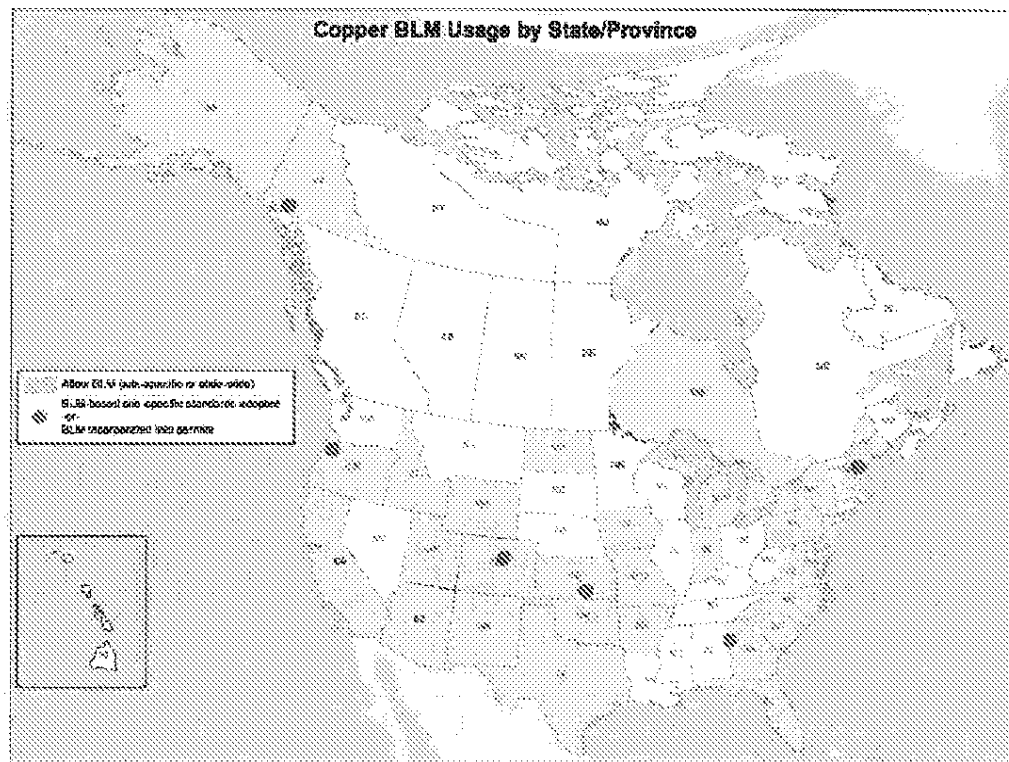


Figure 2: Current status of BLM use (31 States and 2 Provinces/Territories)

For the WVDEP's consideration, here is how other States have chosen to implement the BLM:

State-wide (sole basis)

- The copper BLM has fully replaced existing hardness-based methods.
- Allow any discharge with periodic water quality data to develop criteria to apply on a site-specific basis.

Examples: Oregon, Utah, Colorado, Kansas

State-wide (alternative)

- Both the BLM and existing hardness-based methods are considered acceptable options for deriving copper criteria.

Examples: West North Carolina, South Carolina

Site-specific Option

- The hardness-based standards are retained on the State-level but the BLM is an alternative method for deriving site-specific criteria.

Examples: California, New Mexico, Georgia, Idaho



Recommendations for WV

We strongly encourage the WVDEP to consider wide-spread implementation of the BLM, since this model better reflects copper bioavailability, and thus toxicity, and is consistent with the USEPA national recommended ambient water quality criteria for copper. Based on our decade of experience working closely with both the regulatory and regulated communities on BLM-based water quality criteria, we recommend adopting the BLM on a State-wide basis.

Utilizing the BLM only as a site-specific option usually requires a hearing or rulemaking process in order to get State and USEPA approval of the proposed criteria for the subject water body. It is far simpler to adopt a State-wide option, in which the hardness equation is replaced by the BLM (i.e., simply replacing one model with another). This would allow any stakeholder with sufficient water quality data to use BLM-based copper criteria in development or revision of their National Pollutant Discharge Elimination System (NPDES) permit, rather than the existing hardness-based criteria. This option would eliminate the need for a rulemaking hearing each time the BLM is used to derive copper criteria, saving time and resources for both the regulatory and regulated communities.

Replacing the hardness-based standards fully with the BLM may also provide more regulatory certainty to stakeholders. However, we understand that it may be more practical to simply add the BLM as an alternative to the existing standards, which would provide flexibility to stakeholders interested exploring the BLM. At a minimum, we recommend that the WVDEP add a footnote to 47CSR2 Appendix E, Table 1 that reads:

Freshwater copper criteria may be calculated utilizing the procedures identified in USEPA's Aquatic Life Ambient Freshwater Quality Criteria – Copper (2007), EPA-822-R-07-001

Adoption of the BLM would demonstrate the State's support for state-of-the-science approaches for protecting aquatic life, and allow the regulated community to use these same methods for addressing compliance needs. For example, successful adoption of BLM-based criteria for receiving water may preclude some dischargers from needing to install costly copper removal systems to meet the hardness-based standards. These can be significant benefits for a resource-limited utility, benefiting the permit-holder and the customers they serve, but also benefiting the receiving water by establishing more accurate criteria for protecting aquatic life based on that water's chemistry.



BLM Implementation

As discussed earlier, GEI and CDA have extensive experience working with State regulators and dischargers on implementing the copper BLM. On behalf of CDA, we would be glad to offer our expertise to West Virginia as well. This could include the following:

- Preparing written or oral testimony supporting the technical basis of the BLM
- Providing guidance on application of the BLM and determination of what type of implementation approach would best-fit the data available in West Virginia
- Reviewing datasets, if provided by the WVDEP, to evaluate potential BLM-based criteria for West Virginia waters

CDA has also sponsored BLM training sessions over the past several years, and they have been well-attended by both regulators and the regulated community. If desired, it may be possible to provide a course or related education materials if you would find that helpful.

Additional information on the copper BLM and other metals BLMs can be found at www.cda.org. CDA also has a BLM-based training course available at www.cda.org/blm. The course is available in English and Spanish.



We appreciate the opportunity to provide input on the proposed updates to West Virginia's water quality standards. Please let us know if you have any questions. We look forward to discussing this with you further.

Sincerely,

GEI CONSULTANTS, INC.

Robert W. Gensemer, Ph.D.
Senior Ecotoxicologist

John Gondek, M.S.
Ecotoxicologist

Carrie Claytor, M.S.
CDA Director of Health, Environment and Sustainable Development

JG/RWG

cc: Steven Canton, GEI

References

U.S. Environmental Protection Agency (USEPA). 2007. Aquatic Life Ambient Freshwater Quality Criteria -- Copper. EPA-822-R-07-001. U.S. Environmental Protection Agency, Washington, D.C.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
 REGION III
 1650 Arch Street
 Philadelphia, Pennsylvania 19103-2029

JUL 10 2018

Ms. Laura K. Cooper, Assistant Director
 Water Quality Standards
 Division of Water and Waste Management
 West Virginia Department
 of Environmental Protection
 601 57th St SE
 Charleston, WV 25304

Dear Ms. Cooper:

The U.S. Environmental Protection Agency (EPA), Region III has reviewed the proposed amendments to West Virginia's "Requirements Governing Water Quality Standards" (Title-Series, 47-02). This proposal, which was announced for public review and comment in the West Virginia Register on June 1, 2018, constitutes West Virginia's current triennial review of its water quality standards, as required by the Clean Water Act (CWA) Section 303(c)(1). The purpose of this letter is to provide EPA's comments on the proposal. Please note that the comments and recommendations contained in this letter are strictly for the West Virginia Department of Environmental Protection's (WVDEP) consideration and do not constitute approval or disapproval decisions under CWA §303(c) and 40 CFR §131.21. Neither are these comments a determination by the EPA Administrator under CWA §303(c)(4)(B) and 40 CFR §131.22(b) that revised or new standards are necessary to meet the requirements of the Act.

This letter includes comments on the proposed revisions, as well as additional revisions EPA would recommend West Virginia consider adopting:

Critical Design Flow for and Assessment of Human Health Criteria

West Virginia is proposing to adopt into its water quality standards regulation at §47-2-8.2.b that long-term harmonic mean flow is the critical design flow for human health criteria effluent limits. This is consistent with EPA guidance in Water Quality Standards Handbook, Chapter 5 General Policies, EPA 820-B-14-004, September 2014. EPA also indicated in the Federal Register notice announcing revisions to the Agency's methodology for deriving human health criteria in 2000 (65 FR 66443, 11/3/2000) that harmonic mean flow should be used to implement human health criteria in the calculation of National Pollutant Discharge Elimination System (NPDES) water quality-based permit limits. It is also consistent with W. Va. Code §22-11-7b(c), which EPA approved on January 26, 2018, pursuant to CWA §303(c) and the implementing regulation at 40 CFR §131.



EPA recommends that harmonic mean flow be used to implement human health criteria in NPDES permits because, by and large, human health criteria are designed to protect an individual over a lifetime of exposure, and so EPA attempts to match the longest stream flow averaging period (i.e., harmonic mean flow) with the criteria which is protective over a human lifetime. However, in the 2000 Federal Register notice, EPA also indicated that the geometric mean of ambient water samples be used to determine attainment with human health criteria, as the geometric mean will also account for the long-term exposure effects of chemical water quality criteria. WVDEP is revising footnotes 3 and 4 to Appendix E, Table 1 to specify that, for the assessment of human health criteria, the thirty-day average concentration is not to be exceeded. WVDEP should address how the thirty-day average criteria will account for the long-term exposure effects of its human health criteria.

Site-Specific Numeric Water Quality Criteria

In this triennial review proposal, at §47-2-8.5.a, WVDEP is proposing to establish a process by which site-specific criteria can be established through the NPDES permitting process using a Water Effect Ratio study pursuant to EPA's *Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals* (EPA-823-B-94-001, February 1994) or a site-specific numeric criterion for copper derived using the Biotic Ligand Model (BLM) as described in EPA's *Aquatic Life Ambient Freshwater Quality Criteria – Copper* (EPA-822-R-07-001, February 2007). This provision for establishing certain site-specific criteria, if finalized, is not a water quality standard subject to EPA review under CWA §303(c). As written, WVDEP's addition of this process does not change the requirement that for criteria, including site-specific criteria, to be effective for CWA purposes, they are required to be individually approved by EPA under its CWA §303(c) authority. EPA is willing to work with WVDEP if it would like to explore development of a procedure that facilitates WVDEP's need to abbreviate the WQS adoption process of site-specific water quality criteria, but also satisfies EPA's regulatory responsibilities.

New or Updated CWA §304(a) Criteria Recommendations

In accordance with 40 CFR §131.20(a), states are required to provide an explanation if not adopting new or revised criteria for parameters for which EPA has published new or updated CWA §304(a) criteria recommendations. The purpose of this regulation is to foster meaningful and transparent involvement of the public and intergovernmental coordination with local, state, and federal entities considering recent science provided by EPA through its criteria recommendations. EPA will not approve or disapprove this explanation. For West Virginia's triennial review, the state will need to provide explanations where new or revised criteria are not adopted for parameters where EPA has published new or updated CWA §304(a) criteria recommendations since May 30, 2000. These would include:

- Acrolein criteria for the protection of aquatic life (*Ambient Aquatic Life Water Quality Criteria for Acrolein*, EPA-822-F-09-004, 2009).
- Carbaryl criteria for the protection of aquatic life (*Aquatic Life Ambient Water Quality Criteria for Carbaryl--2012*, EPA-820-R-12-007, 2012).
- Diazinon criteria for the protection of aquatic life (*Aquatic Life Ambient Water Quality Criteria—Diazinon*, EPA-822-R-05-006, 2005).
- Nonylphenol criteria for the protection of aquatic life (*Aquatic Life Ambient Water Quality Criteria— Nonylphenol*, EPA-822-R-05-005, 2005).

- Tributyltin (TBT) criteria for the protection of aquatic life (*Ambient Aquatic Life Water Quality Criteria for Tributyltin (TBT)*, EPA 822-R-03-031, 2003).
- Ammonia criteria for the protection aquatic life. (*Aquatic Life Ambient Water Quality Criteria for Ammonia – Freshwater*, EPA-822-R-13-001, 2013)
- Selenium criterion for the protection of aquatic life (*Aquatic Life Ambient Water Quality Criteria for Selenium – Freshwater*, EPA-822-R-16-006, 2016). West Virginia has adopted fish tissue elements consistent with EPA recommendations, but needs to review the water column elements of EPA's selenium criterion.
- Application, statewide, of the *Aquatic Life Ambient Freshwater Quality Criteria – Copper* (EPA-822-R-07-001, 2007).
- Cadmium criteria for the protection of aquatic life (*Aquatic Life Ambient Water Quality Criteria for Cadmium*, EPA-820-R-16-002, 2016).
- Criteria for the protection of recreational activities (*Recreational Water Quality Criteria*, EPA-820-F-12-058, 2012)
- PCBs & Dioxin criteria for the protection of human health (*National Recommended Water Quality Criteria: 2002—Human Health Criteria Calculation Matrix*, EPA-822-R-02-012, 2002).
- Methylmercury criteria for the protection of human health (*Water Quality Criterion for the Protection of Human Health: Methylmercury*, EPA-823-R-01-001, 2001)

In 2015, EPA updated its CWA §304(a) human health water quality criteria recommendations for 94 chemical pollutants to reflect the latest scientific information and EPA policies, including updated fish consumption rate, body weight, drinking water intake, health toxicity values, bioaccumulation factors, and relative source contributions. In this triennial review proposal, EPA is pleased that West Virginia is updating its current human health criteria to be consistent with EPA's recommendations, as well as adding several criteria. West Virginia should also consider the adoption of the following additional parameters or provide an explanation in accordance with 40 CFR §131.20(a):

- Update of Human Health Ambient Water Quality Criteria: Acrolein. EPA 820-R-15-003.
- Update of Human Health Ambient Water Quality Criteria: alpha-Endosulfan. EPA 820-R-15-007.
- Update of Human Health Ambient Water Quality Criteria: Benzidine. EPA 820-R-15-010.
- Update of Human Health Ambient Water Quality Criteria: beta-Endosulfan. EPA 820-R-15-016.
- Update of Human Health Ambient Water Quality Criteria: Bis(2-Chloro-1-methylethyl) Ether. EPA 820-R-15-019.
- Update of Human Health Ambient Water Quality Criteria: Bis(2-Chloroethyl) Ether. EPA 820-R-15-018.
- Update of Human Health Ambient Water Quality Criteria: Bis(chloromethyl) Ether. EPA 820-R-15-017.
- Update of Human Health Ambient Water Quality Criteria: Chlorodibromomethane. EPA 820-R-15-026.
- Update of Human Health Ambient Water Quality Criteria: Chlorophenoxy Herbicide (2,4-D). EPA 820-R-15-028.
- Update of Human Health Ambient Water Quality Criteria: Chlorophenoxy Herbicide (2,4,5-TP). EPA 820-R-15-029.
- Update of Human Health Ambient Water Quality Criteria: Dinitrophenols. EPA 820-R-15-038.
- Update of Human Health Ambient Water Quality Criteria: Endosulfan Sulfate. EPA 820-R-15-039.
- Update of Human Health Ambient Water Quality Criteria: Endrin Aldehyde. EPA 820-R-15-041.
- Update of Human Health Ambient Water Quality Criteria: Heptachlor Epoxide. EPA 820-R-15-047.
- Update of Human Health Ambient Water Quality Criteria: Hexachlorobutadiene. EPA 820-R-15-049.
- Update of Human Health Ambient Water Quality Criteria: Hexachlorocyclohexane (HCH)-Technical. EPA 820-R-15-050.

- Update of Human Health Ambient Water Quality Criteria: Hexachlorocyclopentadiene. EPA 820-R-15-051.
- Update of Human Health Ambient Water Quality Criteria: Hexachloroethane. EPA 820-R-15-052.
- Update of Human Health Ambient Water Quality Criteria: Isophorone. EPA 820-R-15-054.
- Update of Human Health Ambient Water Quality Criteria: Nitrobenzene. EPA 820-R-15-058.
- Update of Human Health Ambient Water Quality Criteria: Pentachlorobenzene. EPA 820-R-15-059.
- Update of Human Health Ambient Water Quality Criteria: 1,1,2-Trichloroethane. EPA 820-R-15-070.
- Update of Human Health Ambient Water Quality Criteria: 1,2,4,5-Tetrachlorobenzene. EPA 820-R-15-073.
- Update of Human Health Ambient Water Quality Criteria: 1,2,4-Trichlorobenzene. EPA 820-R-15-072.
- Update of Human Health Ambient Water Quality Criteria: 1,2-Dichloropropane. EPA 820-R-15-076.
- Update of Human Health Ambient Water Quality Criteria: 1,2-Diphenylhydrazine. EPA 820-R-15-077.
- Update of Human Health Ambient Water Quality Criteria: trans-1,2-Dichloroethylene (DCE). EPA 820-R-15-078.
- Update of Human Health Ambient Water Quality Criteria: 1,3-Dichloropropene. EPA 820-R-15-080.
- Update of Human Health Ambient Water Quality Criteria: 2,4,5-Trichlorophenol. EPA 820-R-15-082.
- Update of Human Health Ambient Water Quality Criteria: 3,3'-Dichlorobenzidine. EPA 820-R-15-091.
- Update of Human Health Ambient Water Quality Criteria: 3-Methyl-4-chlorophenol. EPA 820-R-15-092.
- Update of Human Health Ambient Water Quality Criteria: p,p'-Dichlorodiphenyldichloroethane (DDD). EPA 820-R-15-093.
- Update of Human Health Ambient Water Quality Criteria: p,p'-Dichlorodiphenyldichloroethylene (DDE). EPA 820-R-15-094.

WVDEP can link to additional information on all the above parameters through EPA's Water Quality Criteria website at: www.epa.gov/wqc

Additional EPA Recommendations for Revisions in this Triennial Review of West Virginia's Water Quality Standards Regulation

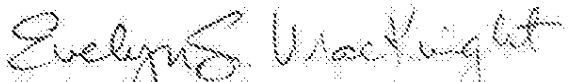
- EPA notes in §47-2-5.2.h.5, West Virginia is adding a provision to allow for overlapping mixing zones for human health criteria, as long as the overlapping mixing zones comply with all guidelines and conditions of West Virginia's mixing zone water quality standards regulation at §47-2-5. This language is consistent with W. Va. Code §22-11-7b(c), which EPA approved on January 26, 2018, pursuant to CWA §303(c) and the implementing regulation at 40 CFR §131. As noted in its January 26, 2018 approval letter, EPA recommends that before allowing overlapping mixing zones for these criteria in a NPDES permit, WVDEP evaluate the cumulative effects of multiple mixing zones within the same waterbody. The potential additive or synergistic effects of certain pollutants could result in the designated use of the waterbody as a whole not being protected.
- West Virginia adopted and EPA approved variances at §47-2-7.2.d.8.2 (Martin Creek and its tributaries) and §47-2-7.2.d.11 (Maple Run, Left Fork Little Sandy Creek and their unnamed tributaries). Both variances indicate that conditions in the watersheds will be evaluated during each triennial review throughout the variance period. If any revisions are proposed because of this evaluation, WVDEP should note revisions need to be done in accordance with federal regulations at 40 CFR §131.14.

- §47-2-7.2.d.16 & §47-2-7.2.d.20.2 establish a site specific selenium criterion for Connors Run and Little Scary Creek of 62 ug/l. EPA has recently published new selenium criteria for the protection of aquatic life (EPA 822-R-16-006). That document includes guidance for developing modified selenium criteria to reflect site-specific conditions where the scientific evidence indicates that different values will be protective of aquatic life and provide for the attainment of designated uses. WVDEP should review the site-specific criteria for Connors Run and Little Scary Creek considering EPA's new guidance, and determine if they are scientifically defensible and protective of designated uses as required by 40 CFR §131.11.
- In addition to specifying the critical flow for the application of criteria for the protection of human health in §47-2-8, WVDEP should consider specifying the criteria flow for the application of the aquatic life criteria. According to the EPA document Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001, March 1991), 7Q10 is recommended for the application of chronic criteria, and 1Q10 for the application of acute.
- EPA has raised several issues with West Virginia's recently revised aluminum criteria for the protection of aquatic life. These revised criteria apply hardness-based equation at certain hardness and pH levels WVDEP should consider whether to delete or revise those criteria in light of the latest science.

EPA will be providing a copy of this letter to the U.S. Fish and Wildlife Service (USFWS) so that USFWS may identify any other recommendations for WVDEP to consider. We will notify WVDEP of any recommendations raised by USFWS. This coordination with the USFWS will help to facilitate EPA's CWA Section 303(c) action and fulfillment of EPA's obligations under ESA once this rulemaking is finalized and submitted to EPA for review.

Thank you for this opportunity to provide comments on West Virginia's triennial review of its water quality standards regulation. EPA would be happy to assist the State as necessary to complete this triennial review. If you have any questions concerning this letter, please contact me at (215)814-5717, or have your staff contact Denise Hakowski at (215)814-5726.

Sincerely,


Evelyn S. MacKnight, Associate Director
Office of Standards, Assessment & TMDLs
Water Protection Division

Written Comment Provision

47CSR2

July 10, 2018

To: West Virginia Water Resources Division of Water and Waste Management

Laura Cooper: laura.k.cooper@wv.gov

On: Triennial Review, Requirements Governing Water Quality Standards, Title Series 47-02

By: Gauley River Power Partners, LLC

Summersville Hydroelectric Project, FERC No. 10813-WV

For the Summersville Hydroelectric Project, Gauley River Power Partners, LLC (Gauley) hereby provides written comments for the triennial review noted above. We appreciate the opportunity to comment and share the Department of Environmental Protection's (DEP) goals expressed in the document Scope, 1.1.

The Summersville project is an 80-MW hydropower facility on the Gauley River in Nicholas County, West Virginia. The project is located at the existing US Army Corps of Engineers Summersville Dam, uses impounded water to generate electricity for distribution into the regional grid system, and was licensed by the Federal Energy Regulatory Commission on September 25, 1992.¹

The project's latest NPDES permit 0114847 from DEP was issued on October 31, 2017, and contained substantive changes to the prior permit due to incorporation of new WV Water Quality Standards. Specifically, new "hard" temperature limits were specified for Outfalls 001 and 002, which are generator cooling water discharges. Within the facility, the generator cooling water is extracted from the penstock, cools the 2 vertical generating units, and then is piped to the plant tailwater in a closed system, inaccessible for sampling. Thus, we have collected samples from these outfalls within the tailwater "mixing zone", within 5' of the actual outfall. The method has been regarded as satisfactory by DEP in two prior inspections and during August, 2017 scoping for the new permit.

Since the tailwater mixing zone characteristics (primarily and due to volumetric flow rate relative to the low-flow outfalls 001 and 002) reflect the Gauley River at any time, our sampling results typically follow Gauley River parameters, especially for temperature. Thus, meeting the new permit's temperature limits (September and November, 62 F and 55 F max daily, respectively) appears to be infeasible, when prior years sampling results have shown that ambient Gauley River temperatures within the mixing zone do not fall within the new temperature criteria:²

DATE	TEMP (F)
SEP 2016	70.7
SEP 2017	67.1
NOV 2017	55.4

¹ 60 FERC 61,291

² 47 CSR 2, Appendix E, Table 1, 8.29.2

The tailwater mixing zone is strongly affected by flow rate through the facility and by any separate US Army Corps releases, by regional weather patterns, and by any stratification of the Summersville impoundment (by the Corps); all entirely outside the control of Gauley. Therefore, we are concerned with our ability to maintain compliance with the new temperature limits applicable to outfalls 001 and 002, yet recognize that revision to 47 CSR 2 could afford solution(s) without compromising natural resource protection at the project and Gauley River.

First, although both the Summersville impoundment and tailwater are classified as Trout Waters (Appendix A), only the impoundment is designated as a Cool Water Lake (Appendix F). We are unsure if the Summersville tailwater is a “spawning area” within the intent of Appendix E, Table 1, 8.29.2, but the temperature limits in 8.29 are much more reasonable and achievable, in that they reflect limits relative to the ambient water, which (as noted above) is mostly affected by factors outside the control of the project. As part of the Kanawha drainage, even the applicability of 8.29.1 temperature requirements at the Gauley project tailwater are much more achievable than the limits of 8.29.2.

Second, a site-specific water quality criterion for the Gauley River tailwater is feasible³ per 47 CSR 2 7.2.c.4 *“Where a natural condition of a water is demonstrated to be of lower quality than a water quality criterion...the Secretary may establish a site-specific water quality criterion for aquatic life.”* As the Summersville impoundment reflects natural weather patterns, etc., it is preferable to establish a site-specific temperature limit for the Summersville tailwater (7.2.d.24 Gauley River) which is relative to the impoundment, as expressed in 8.29 or 8.29.1.

Gauley appreciates the opportunity to comment in this triennial review, and believes that clarification of “spawning area” and whether the Summersville tailwater is a “spawning area” within 8.29.2 and/or affording the tailwater a site-specific water quality criterion for temperature relative to the upstream impoundment would afford reasonable certainty that temperature limits could be achieved. Any change to the existing rule in this regard would continue the long-term beneficial function of the facility on the Gauley River, using flow supplied by the Army Corps’ operation of the Summersville Dam. Changes to the existing rule, or their applicability and application at the Summersville project, are consistent with the intent and purposes in the Scope of the rule.

³ We note that the Summersville Project/Gauley River has been omitted in both 47 CSR 2 Sections 6.6.b (Category E2-Cooling Water) and 6.6.c (Category E3-Power Production).

July 10, 2018

Laura Cooper, Assistant Director
West Virginia Department of Environmental Protection
Division of Water & Waste Management
601 57th Street
Charleston, WV 25304
Via Electronic Mail: Laura.K.Cooper@wv.gov

Re: Public Comment Period on Draft Legislative Rule Revisions to 47 CSR 2- State Water Quality Standards

Dear Ms. Cooper:

Pursuant to the public notice published by the West Virginia Department of Environmental Protection (WV DEP), Mission Coal Company, LLC offers the following comments regarding the revisions to the state's water quality standards set forth in 47 CSR 2.

Mission Coal Company, LLC operates several large and medium sized underground mines and one medium sized surface mine in Central and Southern WV. Water quality standards and issues associated with them play a major role in how we manage our current operations and how we plan for potential future operations. With over 1,200 direct employees and many more contractors and vendors, our operations have a very favorable effect on the economy of this state. Actions taken by this agency affect every decision we make concerning the future of our business.

As part of the revisions to 47 CS2, WV DEP proposes to adopt fifty-three revised criteria based on the federal Environmental Protection Agency's (EPA) National Recommended Human Health Ambient Criteria for these parameters. This is egregious,

considering the struggles WV DEP has endured in the past few years attempting to correct EPA's past mistakes in development of water quality criteria.

At a minimum, WV DEP must recalculate the National Recommended Criteria for these parameters based on West Virginia's fish consumption study. The *Survey of West Virginia Residents' Consumption of Fish*, published in 2008 by Responsive Management (the 2008 Survey) and prepared for the WV DEP, determined that the fish consumption rate for State residents is lower than the national average. WV DEP has utilized the fish consumption rates from the 2008 Survey in the development of methylmercury criteria. WV DEP should recalculate the human health criteria for the fifty-three organic chemicals utilizing the fish consumption rates from the 2008 Survey.

While WV DEP's public notice claims, "No economic impacts on the state or its residents are anticipated", the agency clearly did not consider the potential cost to NPDES permittees facing water quality-based effluent limits for certain parameters that might be orders of magnitude lower than those based on current water quality criteria. The agency should revise this statement after a careful consideration of the potential compliance costs to the regulated community so the West Virginia Legislature can fully understand the implications of this proposal.

Mission Coal Company, LLC appreciates the opportunity to provide these comments regarding the revisions to the state's water quality standards and looks forward to seeing our comments acted upon in a responsible manner.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Mike Isabell". The signature is fluid and cursive, with the first name "Mike" and last name "Isabell" clearly distinguishable.

Mike Isabell
Director of Environmental Affairs



1851 Main Street, P.O. Box 670, Follansbee, WV 26037

July 9, 2018

E-Mail Transmission

Ms. Laura Cooper
Assistant Director, Water Quality Standards
WVDEP
Division of Water & Waste Management
601 57th Street SE
Charleston, WV 25304-2345

**Re: Mountain State Carbon, LLC
(Wholly Owned Subsidiary of AK Steel Corporation)
Comments on Proposed Revisions to Requirements
Governing Water Quality Standards
Water Resources Division of Water and Waste Management
W. Va. Code §§ 22-11-4(a)(16); 22-11-7b
Title 47, Series 2 (§47-2)**

Dear Ms. Cooper:

Mountain State Carbon, LLC (MSC) is pleased to submit comments on proposed revisions to the Requirements Governing Water Quality Standards (WQS) at Title 47, Series 2. These comments are submitted in response to the West Virginia Department of Environmental Protection's (the Department) public notice of May 25, 2018. MSC is providing comments on the following proposed revisions to the WQS:

1. The adoption of the U.S. Environmental Protection Agency's 2015 Nationally Recommended Human Health Water Quality Criteria;
2. The overlapping of mixing zones for human health water quality criteria;
3. The use of the harmonic mean flow as the critical design flow to develop water quality-based effluent limits based on human health water quality criteria;
4. The option to develop site-specific water quality criteria for copper based on a biotic ligand model; and
5. MSC believes the proposed revisions to the WQS are legally insufficient and do not meet the requirements of the West Virginia Administrative Procedures Act.

A detailed discussion for each comment is provided below.

Ms. Laura Cooper

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COMMENT 1 | MSC recommends the Department preserve the currently-effective human health water quality criteria (§47 CSR-2 Appendix E, Table 1)

States are not Required to Adopt the Nationally Recommended Water Quality Criteria

The U.S. Environmental Protection Agency (USEPA) issues national recommendations for water quality criteria pursuant to Section 304(a) of the Clean Water Act. Individual states may use the national recommendations as starting points for developing water quality criteria in their state-specific standards. 40 CFR §131.11(b)(1) provides the following options for establishing numeric water quality criteria values for individual states:

1. Adopt the nationally recommended criteria;
2. Modify the national criteria considering state-specific conditions; or
3. Develop alternate scientifically-defensible criteria.

The federal regulations make clear that states are not required to adopt the nationally recommended criteria as published by USEPA, or to adopt the default values USEPA relied upon in the equations used to derive those criteria. 40 CFR §131.11(a) requires states to adopt criteria that protect the designated use and that are based on “sound scientific rationale.” This provides states the opportunity to conduct the analysis needed to develop state-specific criteria based on waterbody-specific designated uses, the costs of meeting the criteria, the benefits of the adoption of the criteria, the local and statewide socioeconomic costs, and other relevant factors.

The 2015 USEPA Nationally Recommended Human Health Water Quality Criteria are Overly Conservative

The equations used to derive USEPA’s National Recommended Human Health Water Quality Criteria (NRHHWQC) incorporated overly conservative default values and assumptions. USEPA’s use of multiple conservative values and assumptions in the NRHHWQC equations led to *compounding conservatism* in the calculations, and ultimately resulted in excessively stringent criteria for many parameters.

<i>Compounding Conservatism</i>	<i>The compounding effect of multiple, conservative assumptions resulting in an implausibly high exposure estimate that when combined with most sensitive effects metrics, results in unrealistic estimates of risk.¹</i>
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Exposure assessments for regulatory purposes have evolved over time. In the 1970s, the U.S. regulatory policy encouraged or mandated the use of conservative approaches in conducting exposure assessments.² By the 1980s, concerns arose regarding the repeated use of conservative exposure factors or assumptions that produced unrealistically high estimates of exposure risks,

¹ *Measures of Compounding Conservatism in Probabilistic Risk Assessment*. Alison Cullen. Risk analysis: an official publication of the Society for Risk Analysis. Society for Risk Analysis. 14.389-93. August 1994.

² *Risk Assessment Guidance for Superfund*. USEPA Office of Emergency and Remedial Response. EPA/540/1-89/002. December 1989.

Ms. Laura Cooper

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July 9, 2018

such that the costs of achieving the resultant cleanup levels or criteria were insurmountable.³ In the early 1990s, risk assessors began to apply probabilistic or “Monte Carlo” techniques to eliminate the possibility of *compounding conservatism*.⁴ The USEPA and other agencies have embraced this approach as documented in several guidance documents, including the *Technical Support Document for Water Quality-based Toxics Control* (USEPA TSD) and the *Risk Assessment Guidance for Superfund: Volume III - Part A*.^{5,6}

USEPA has recently recommended the enhanced utilization of probabilistic risk assessment (PRA or “Monte Carlo” analysis) in lieu of *compounding conservatism* resulting from the use of a deterministic risk assessment. USEPA has acknowledged that PRA more accurately estimates risk, and has recommended that new or updated guidance be developed in the following areas:⁷

- Use of probabilistic approaches for environmental risk assessments;
- Use of probabilistic risk assessments (PRA models) to evaluate health effects data;
- Use of PRA models to evaluate toxicity data; and
- Methods for addressing PRA model uncertainties.

Until USEPA develops new or updated guidance in the areas listed above, MSC believes it would be reasonable and defensible for the Department to preserve the currently-effective human health water quality criteria, and to forgo adoption of the NRHHWQC, which are based on deterministic risk assessments that result in *compounding conservatism* and unreasonably stringent criteria.

USEPA Failed to Correct Critical Flaws and Errors in Methodology in publishing its 2015 Nationally Recommended Human Health Water Quality Criteria

In response to the 2014 public notice of the draft NRHHWQC proposed by USEPA, many commenters identified critical flaws in the draft NRHHWQC. Despite USEPA’s awareness of these critical flaws and errors in methodology, the agency failed to revise its methodology and data prior to promulgating the final NRHHWQC. Therefore, the following comments made by numerous parties to USEPA in 2014 remain pertinent to the draft criteria currently proposed by the Department:

- Outdated Methodology - The draft and final NRHHWQC were developed using the *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*⁸ and did not follow the 2014 USEPA *Framework for Human Health Risk Assessment to Inform Decision*

³ *Principles and Methods of Toxicology, Fifth Edition*. Edited by A. Wallace Hayes. Taylor and Francis Group, LLC. ISBN: WBBL-419-2C7B. 2008.

⁴ Ibid.

⁵ *Technical Support Document for Water Quality-based Toxics Control*. USEPA Office of Water. EPA/505/2-90-001. March 1991.

⁶ *Risk Assessment Guidance for Superfund: Volume III - Part A, Process for Conducting Probabilistic Risk Assessment*. USEPA Office of Emergency and Remedial Response. EPA 540-R-02-002. December 2001.

⁷ *Risk Assessment Forum White Paper: Probabilistic Risk Assessment Methods and Case Studies*. USEPA Office of the Science Advisor. EPA/100/R-14-004. July 2014.

⁸ *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health*. USEPA Office of Science and Technology. EPA-822-B-00-004. October 2000.

*Making.*⁹ Many commenters asserted that this methodology should be updated, because amongst numerous identified flaws, the methodology has not been reviewed by USEPA's Science Advisory Board since 1993;

- Upper Percentile Values - The methodology used upper percentile values for nearly all parameters in the criteria derivation equations (another example of unreasonable *compounding conservatism*);
- Drinking Water Consumption Values – The draft NRHHWQC were calculated assuming a drinking water intake of 3 liters per day of untreated surface water for adults age 21 or older (representing the 86th percentile, and revised to 2.4 liters per day in the final 2015 NRHHWQC), which fails to consider the following:
 - A miniscule portion of the U.S. population consumes any untreated surface water. The vast majority of drinking water consumed by humans in the U.S. is via treated and untreated groundwater, treated surface water, or bottled water;
 - The Safe Drinking Water Act already regulates the consumption of surface water, and many of its Maximum Contaminant Levels (MCLs) are already more stringent than the final NRHHWQC;
 - Bottled water and water consumed in commercial establishments is already regulated by public health laws; and
 - USEPA failed to use best available science, in a variety of ways that were identified in the 2014 comments, in calculating the 2.4L/day consumption rate.
- Fish Consumption Values – The criteria were developed based on the assumption that all fish consumed by humans in the U.S. were caught from U.S. inland waters, and did not consider fish caught from offshore U.S. waters or fish imported from other global regions, despite evidence that the majority of fish consumed in the U.S. are imported; and
- Bioaccumulation vs. Bio-concentration Factors¹⁰

Bioaccumulation: Bioaccumulation is the accumulation of chemicals in aquatic organisms from all sources (water, food, sediment, etc.).

Bio-concentration: Bio-concentration is the accumulation of chemicals in an organism when the source of the chemicals is solely water. Bio-concentration values are used to predict contamination levels in an organism based on chemical concentration in surrounding water, or water consumed by the organism.

The criteria were developed utilizing chemical-specific bioaccumulation factors and did not consider chemical-specific bio-concentration factors. This methodology utilized by USEPA has been widely criticized, including by USEPA's Scientific Advisory Board, as being overly conservative. The previous criteria were based on bio-concentration factors, formulated using

⁹ *Framework for Human Health Risk Assessment to Inform Decision Making*. USEPA Office of the Science Advisor. EPA-100-R-14-001. February 2015.

¹⁰ *Bioconcentration, Bioaccumulation, Biomagnification and Trophic Magnification: A Modeling Perspective*. D. Mackay, A. Celsie, D. Powell and J. Parnis. Environmental Science: Processes & Impacts, Royal Society of Chemistry. 2018, 20, 72.

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measured values from field testing. In contrast, the new criteria are based on bioaccumulation factors that were modeled, using a tool (Estimation Programs Interface, or EPI Suite) that USEPA's own website acknowledges is not appropriate for use when measured values are available:

*"EPI Suite™ is a screening-level tool and should not be used if acceptable measured values are available."*¹¹

The use of modeled bioaccumulation factors creates unnecessarily stringent criteria, especially for many PAHs. As an example, the updated NRHHWQC for benzo(a)pyrene shows EPI Suite model-estimated bioaccumulation factors of 2,736 L/kg, 984 L/kg and 396 L/kg for trophic levels 2, 3 and 4, respectively, while the previous bio-concentration factor used was 30 L/kg.¹² This previous bio-concentration factor was derived from a model ecosystem study. A recent bioaccumulation study in fish found that the depuration rate, or the rate in which biological contaminants are purged from an organism, was so rapid that a reliable bioaccumulation factor could not be calculated. In addition, the study found that the majority of benzo(a)pyrene was concentrated in the digestive system and therefore not in the edible portion of the fish.¹³ USEPA also reports most aquatic organisms metabolize benzo(a)pyrene, eliminating it in days, and thus this compound is not expected to bio-concentrate in these organisms.¹⁴

Considering the information presented above, it is evident that the Department did not consider the latest and best available science in formulating the current proposal, including data and assessments published by USEPA after promulgating the final 2015 NRHHWQC. MSC believes it would be reasonable and defensible for the Department to maintain the currently-effective human health water quality criteria and to forgo adoption of the NRHHWQC.

Development of the Draft and Final USEPA NRHHWQC was Controversial

In addition to the overly conservative default values and assumptions in the equations USEPA relied upon to derive the NRHHWQC, development of the NRHHWQC was controversial for several reasons:

- With recommended criteria significantly more stringent for numerous pollutants than currently-effective human health criteria (see table below for pollutants of concern for Mountain State Carbon), the imposition of permit limits based on those criteria would likely create considerable and unreasonable new costs to NPDES permit holders. A study conducted by HDR consultants

¹¹ <https://www.epa.gov/tsca-screening-tools/epi-suite™-estimation-program-interface>

¹² *Draft Update of Human Health Ambient Water Quality Criteria: Benzo(a)pyrene*. USEPA Office of Water Quality Standards. EPA 820-D-14-012. 2014.

¹³ *Draft Validation Report of a Ring Test for the OECD 305 Dietary Exposure Bioaccumulation Fish Test*. Organization for Economic Cooperation and Development. 2011.

¹⁴ *Toxicological Review of Benzo[a]pyrene [CASRN 50-21-8]*. USEPA Office of Research and Development. EPA/635/R-17/003Fa. January 2017.

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for the Washington Department of Ecology indicates compliance costs for industrial and municipal dischargers could be in excess of hundreds of millions of dollars;¹⁵

**Comparison of Current and Proposed Revised Criteria
For Pollutants of Concern at Mountain State Carbon (ug/L)**

Parameter	Human Health Criteria					
	Fish Consumption			Drinking Water & Fish Consumption		
	Current	Proposed	% Reduction	Current	Proposed	% Reduction
Cyanide, Total ^[1]	None	400	NA	None	4	NA
Benzo(a)anthracene	0.018	0.0013	93 %	0.0038	0.0012	68 %
Benzo(b)fluoranthene	0.018	0.013	28 %	0.0038	0.0012	68 %
Benzo(k)fluoranthene	0.018	0.013	28 %	0.0038	0.012	NA
Benzo(a)pyrene	0.018	0.00012	> 99 %	0.0038	0.00012	97 %
Dibenzo(a,h)anthracene	0.018	0.00013	> 99 %	0.0038	0.00012	97 %
Indeno(1,2,3-cd)pyrene	0.018	0.0013	93 %	0.0038	0.0012	68 %

[1] The current West Virginia water quality standards regulate WAD cyanide. The proposed revisions replace WAD cyanide criteria with total cyanide criteria.

- Even after expending exorbitant costs to construct, install and operate wastewater treatment systems utilizing advanced treatment technologies that are currently available and technologically feasible, many of the criteria still could not be achieved;
- Operation of advanced treatment technologies would generate new residual waste streams containing pollutants that could otherwise be discharged with no appreciable or discernable harm to human health or the environment. These residual waste streams would require further treatment or offsite disposal by either dewatering for solid waste disposal or by deep-well injection. In addition, the operation of advanced treatment technologies would also result in

¹⁵ 2018 Kentucky Triennial Review. K. Shanks, Director of Public Affairs, Kentucky Chamber of Commerce. June 6, 2018.

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increased water treatment chemical usage. The increased energy use associated with operation of advanced treatment technologies is also a concern; and

- The NRHHWQC are based on toxicity values derived by the California Environmental Protection Agency which may not be appropriate for West Virginia.

The Department's Comments to USEPA Critical of the May 2014 Draft NRHHWQC Remain Valid

In response to the *Draft: Updated National Recommended Water Quality Criteria – Human Health* proposed by USEPA in May 2014, the Department provided its own set of comments raising several concerns with the draft NRHHWQC.¹⁶ In summarizing those comments, the Department explained:

- The proposed criteria for many organic compounds are below detection levels achievable by conventional gas chromatography (GC) and gas chromatography/mass spectrometry (GC/MS) instrumentation;
- The lower detection levels achievable by high resolution GC and GC/MS instrumentation are closer to the proposed criteria for some parameters; however most environmental laboratories do not have this instrumentation available, most likely due to prohibitive costs;
- The proposed criteria for several parameters are still considerably lower than the detection levels achieved by high resolution GC and GC/MS instrumentation;
- An increase in analytical costs will be incurred by NPDES permit holders for those parameters for which detection levels can be provided at or below the proposed criteria with high resolution GC and GC/MS instrumentation;
- Proposed standards for organic compounds in the parts per quadrillion range introduces the potential for false positives, which could result in unmerited exceedances or violations for NPDES permit holders; and
- USEPA should examine the proposed criteria before adoption to ensure they are both technologically possible and economically feasible.

USEPA chose not to revise the methodologies and data used to develop the criteria in response to comments from the Department (and similar comments submitted by numerous other parties) prior to promulgation of the final NRHHWQC, and the concerns the Department expressed in 2014 continue to be warranted. MSC requests that the Department consider its own comments critical of the NRHHWQC in support of preserving the currently-effective human health water quality criteria in West Virginia.

¹⁶ *Comments – Draft: Updated National Recommended Water Quality Criteria for the Protection of Human Health*. Docket ID No. EPA-HQ-OW-2014-015. S. Mandirola, Director WVDEP Division of Water and Waste Management. August 13, 2014.

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The NRHHWQC do not Consider State-Specific Data

The risk assessments conducted by USEPA in development of the NRHHWQC do not consider state-specific data. For example, USEPA assigned national default values for both human fish consumption and body weight:

Fish Consumption: A 2008 survey commissioned by the Department indicates that West Virginians consume significantly less fish than the national average:^{17,18}

<u>Region</u>	<u>90th Percentile Freshwater Fish Consumption</u>
West Virginia	9.3 to 9.9 grams per day
National Average	48 to 58 grams per day

Body Weight: The average weight of an adult male in the United States is 195.7 pounds.¹⁹ The average weight of an adult male in West Virginia is 202.1 pounds.²⁰

Based on the information presented above, West Virginians are consuming *significantly* less freshwater fish per unit of body weight than the national average. The risk factors used by USEPA to calculate the NRHHWQC are disproportionately high and are not appropriate for West Virginia residents.

Regional States' Review and/or Adoption of the Final NRHHWQC

The table below presents the status of water quality standards in regional states that are in the process of or have completed triennial reviews since USEPA adopted the Final NRHHWQC. In summary, of the eight regional states listed, none have adopted the NRHHWQC and only three states are even considering adopting the NRHHWQC.

**Comparison of Regional States' and Agencies' Water Quality Standards
Reviewed since USEPA adopted the Final NRHHWQC**

State or Agency	EPA Region	Most Recent Review of Water Quality Standards	Status of Adopting the 2015 NRHHWQC
ORSANCO	-	2018 Triennial Review (public comment period closed)	Proposed revisions do not adopt the NRHHWQC
IN	5	2018 Triennial Review (pre-public notice period)	Proposed revisions have not been public noticed. No indication of whether NRHHWQC are proposed to be adopted.

¹⁷ Survey of West Virginia Residents' Consumption of Fish. Responsive Management. November 2008.

¹⁸ Estimated Fish Consumption Rates for the U.S. Population and Selected Subpopulations Final Report. USEPA. April 2014.

¹⁹ <https://www.cdc.gov/nchs/fastats/body-measurements.htm>.

²⁰ <http://www.wvdhhr.org/bph/hsc/pubs/other/obesityreport2011/obesityreport2011.pdf>.

**Comparison of Regional States' and Agencies' Water Quality Standards
Reviewed since USEPA adopted the Final NRHHWQC**

State or Agency	EPA Region	Most Recent Review of Water Quality Standards	Status of Adopting the 2015 NRHHWQC
KY	4	2018 Triennial Review (pre-public notice period)	Proposed revisions expected to be public noticed in July 2018. Per recent statements by KDOW, the agency is unlikely to adopt the NRHHWQC
MD	3	2016 Triennial Review (Amendments adopted 2018)	NRHHWQC were not adopted
MI	5	2017 Triennial Review (Amendments adopted 2018)	NRHHWQC were not adopted
OH	5	2016 Triennial Review (Amendments adopted 2017)	NRHHWQC were not adopted
PA	3	2018 Triennial Review (public comment period closed)	NRHHWQC are proposed to be adopted
TN	4	2018 Triennial Review (public comment period open)	Draft revisions were public noticed June 2018. NRHHWQC are proposed to be adopted
VA	3	2018 Triennial Review (public comment period closed)	NRHHWQC are proposed to be adopted

COMMENT 2 | MSC endorses the Department's proposed revision to allow overlapping mixing zones for human health water quality criteria (§47 CSR 2 5.2.h)

MSC endorses the Department's proposed revision to allow for overlapping mixing zones for human health criteria on a case-by-case basis, provided that the mixing zone complies with the guidelines of subsection 5.2.h.

The USEPA TSD referenced in footnote 5 of these comments acknowledges the consideration of overlapping mixing zones as a multistep holistic approach to determine if a mixing zone is appropriate and allowable. A summary of regional states' water quality standards rules regarding overlapping of mixing zones is provided below:

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<u>State or Agency</u>	<u>Overlapping Mixing Zone Allowed²¹</u>
ORSANCO	Yes
Indiana	Yes
Kentucky	Yes
Maryland	Yes
Michigan	Yes
Ohio	Yes
Tennessee	Yes
Virginia	Yes

In addition to the proposed revision to allow overlapping mixing zones for human health criteria, MSC suggests the following amendment to subsection 5.2.j, which provides exceptions to the limitations on mixing zones (proposed amendment emphasized):

5.2.j. The Secretary may waive the requirements of subdivision 5.2.e., paragraph 5.2.h.2, and paragraph 5.2.h.5 for human health mixing zones, if a discharger provides an adequate demonstration of:

This proposed revision clarifies that the restrictions for both non-overlapping and overlapping mixing zones may be waived if an acceptable demonstration is provided to the Department.

COMMENT 3 | MSC endorses the Department's proposed revision to adopt the harmonic mean flow as the critical design flow to develop water quality-based effluent limits based on human health water quality criteria (§47 CSR 2-8.2.b)

MSC endorses the Department's proposed revision to adopt the harmonic mean flow as the design flow used to develop water quality-based effluent limits (WQBELs) based on human health criteria. The current WQS rule specifies a default stream design flow equal to the $Q_{7,10}$ for human health criteria, which is the minimum 7-day average expected to occur once every 10 years. An assessment of daily Ohio River flows reported at the Pike Island Locks and Dam from 1987 to 2013 shows the following:

- The established $Q_{7,10}$ of 5,880 cfs for the Pike Island Pool is calculated as the approximate 1.5th percentile of daily flow. Thus, daily Pike Island Pool flows are in excess of the $Q_{7,10}$ approximately 98.5 percent of the time; and
- For the 70-year lifetime exposure period recommended by USEPA (approximately 25,500 days), the Pike Island Pool is predicted to be at or below the $Q_{7,10}$ a total of only 383 days.

²¹ Pennsylvania water quality standards do not prescribe spatial limitations on mixing zones. PADEP develops effluent limits using the PENTOXSD model which does not consider additional point source discharges to the same surface water. MSC presumes the allowance of overlapping mixing zones is at the discretion of the NPDES permit writer on a case-by-case basis.

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Furthermore, USEPA recommends the use of the harmonic mean flow for development of permit limits for carcinogens, and states that the harmonic mean flow may be appropriate for certain noncarcinogens (see footnote 5):

USEPA TSD at p 88

"The long-term harmonic mean flow is recommended as the design flow for carcinogens. The recommendation of long-term harmonic mean flow has been derived from the definition of the human health criteria (HHC) for carcinogenic pollutants. The adverse impact of carcinogenic pollutants is estimated in terms of receptors (human) lifetime intakes. To be within the acceptable level of life-time body-burden of any carcinogen, such intakes should not exceed the HHC during the life-time of the receptor. A life-time for exposure to carcinogenic pollutants is defined as 70 years, or approximately 365 (days/year) multiplied by 70 years."

USEPA TSD at p 89

"If the effects from certain noncarcinogens are manifested after a lifetime of exposure, then a harmonic mean flow may be appropriate."

The use of the $Q_{7,10}$ flow to develop effluent limits based on NRHHWQC is essentially a "zero exposure, zero risk" policy that is unreasonably conservative. The adoption of the harmonic mean flow will result in more reasonable frequencies of flows and will still be environmentally protective and in accordance with USEPA guidance and policy.

COMMENT 4 | MSC endorses the Department's proposed revision to allow for development of site-specific criteria for copper based on a biotic ligand model (§47 CSR 2-8.5)

Although not of current concern for Mountain State Carbon, MSC endorses the Department's proposed revision to allow establishment of site-specific criteria for copper by use of USEPA's biotic ligand model for copper (Copper BLM).

The Copper BLM is a metal bioavailability model that uses receiving water body characteristics and monitoring data to develop site-specific water quality criteria. The Copper BLM is also a predictive tool that can account for variations in metal toxicity using local water chemistry information. The Copper BLM utilizes the best available science and serves as the basis for USEPA's nationally recommended criteria.

Although implementation of the biotic ligand model approach is currently limited to copper, MSC recommends the Department consider use of the BLM approach for developing site-specific criteria for other metals that are currently under consideration by USEPA (aluminum, zinc and lead).

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COMMENT 5 | **MSC believes the “fiscal note” provided on page 2 of the revised WQS proposed by the Department does not meet the requirements of the West Virginia Administrative Procedures Act (§29A-3-1, *et seq*)**

Per the West Virginia Administrative Procedures Act at §29A-3-5, all proposed rules must include a “fiscal note.” The Act provides that a fiscal note shall itemize the cost of implementing the rule as it relates to persons affected by the rule, include a statement of the economic impact of the rule on the state or its residents, and clearly state the objectives of the rule. Page 2 of the public notice for the revised standards proposed by the Department simply states that “no economic impacts on the State or its residents are anticipated” as a result of adopting the proposed revised standards. MSC believes this statement does not meet the requirements of the Act.

The information provided herein under Comment 1 demonstrates that the “fiscal note” provided with the proposed revised standards lacks any basis in a sound economic analysis. In stark contrast to the Department’s assertion that “no economic impacts... are anticipated,” the following economic impacts to the state or its residents will be generated by the Department’s adoption of the NRHHWQC:

- Costs in excess of hundreds of millions of dollars to NPDES permit holders for the design, construction, installation and operation of advanced treatment technology facilities required as a result of the imposition of permit limits based on the NRHHWQC;
- Rising prices of consumer goods manufactured with processes generating any of the chemicals covered under the NRHHWQC, as a direct result of the increased water treatment expenses;
- Many of the criteria still not being achievable even with costly advanced treatment technologies, resulting in unmerited NPDES permit violations potentially resulting in fines or other costs to regulated entities; and
- Non-water quality environmental impacts:
 - Increased solid waste generation - The operation of advanced treatment technologies generating residual waste streams containing pollutants that could have otherwise been discharged with no appreciable or discernable harm to human health or the environment; and
 - Increased energy consumption resulting from the operation of advanced treatment technology facilities.

Specifically, MSC anticipates there would be adverse financial impacts on Mountain State Carbon from the proposed revisions to the water quality standards, which were not taken into account in the “fiscal note”.

As part of the comments provided to USEPA on the draft 2014 NRHHWQC, the Department did acknowledge increased costs associated with the implementation of high resolution analytical methods capable of lower method detection levels, but did not make any comments related to the economic impacts to NPDES permit holders resulting from the design, construction, installation

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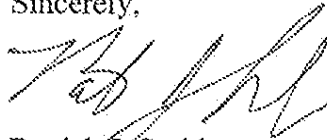
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and operation of advanced treatment technology facilities that would be required as a result of the imposition of permit limits based on the NRHHWQC. The increased analytical costs acknowledged by the Department are infinitesimal in comparison to the costs to install and operate advanced treatment facilities.

As a result of these anticipated impacts to Mountain State Carbon, other regulated entities, and residents of the state, MSC recommends that the Department conduct a comprehensive state-wide analysis to assess financial and economic impacts to West Virginia prior to adopting the NRHHWQC or other criteria significantly more stringent than the currently-effective human health water quality criteria.

MSC appreciates the opportunity to provide comments on revisions to the water quality standards proposed by the Department. MSC reserves the right to present additional comments on subsequent draft water quality standards proposed by the Department as part of any future public notice process. If you have any questions, please feel to contact me at (304) 527-5676 or at Patrick.Smith@mscarbonllc.com. We appreciate the consideration of these comments and look forward to the Department's response.

Sincerely,



Patrick J. Smith
Manager, Environmental Affairs
Mountain State Carbon, LLC

cc: Russell J. Dudek
AK Steel Corporation

Timothy Hagerty
Frost Brown Todd LLC

Matthew A. Oxsalida, P.E.
Amendola Engineering, Inc.



Ohio Valley Environmental Coalition

Supporting Organized Voices and Empowered Communities Since 1987

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We at the Ohio Valley Environmental Coalition and our members, not only as an organization but as citizens of the state of West Virginia, submit the following comments on the proposed changes to the Water Quality Standards rule as part of the Triennial Review.

First and foremost, we are concerned about what these changes mean for our numerous streams in our state, as well as for impacts to human health. The U.S. EPA recently made recommendations for safe limits of 94 chemical pollutants based on the latest scientific information. However, WVDEP has chosen only to adopt 56 of these 94 updated limits. With the wide variety of potential industrial big polluters like coal, oil and gas, and petrochemicals, we urge the WVDEP to adopt all of the 94 recommended limits to protect human health. The majority of streams in West Virginia are already impaired in some way, mostly by industries. Our waterways are an important component in everyday life for West Virginians. They run through a vast number of our communities and are used for recreation and sport. Some in these communities rely on the aquatic life in those streams for food sources. However, a vast majority of bodies of water in the state have fish consumption advisories. This is outlandish.

The revision that would allow for Overlapping Mixing Zones would only exacerbate this issue on top of the failure to adopt the full 94 recommendations of safe chemical pollutant levels. These mixing zones will create toxic “hot spots” in our waterways. Language must be added to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone. Furthermore, there should be required signage that warns the public of high levels of pollutants in the body of water that are harmful to human health, and that contact with the water or consumption of fish harvested in the area could have severe health impacts. The signage should also include graphics that depict the toxicity of the water for individuals who cannot read English.

Also, the implementation of the “Cancer Creek” bill passed by the WV Legislature in 2017 is a farce. The new method this legislation requires called the harmonic mean is not adequate for protecting us from toxins with short-term exposure risks. Instead, the consequence will be more toxins and cancer-causing chemicals allowed in our water. For the health and safety of the public, the WVDEP must use discretion to apply a more protective method for calculating discharge limits for pollutants known to have short-term exposure risks. The WVDEP must do its job to require more protections of human health when it comes to water quality.

In conclusion, one must ask why the WVDEP would choose to weaken water quality standards. It seems WVDEP seems to be making all of these changes only benefit the big industry polluters and not the public at large. These changes give a green-light to these corporations to continue to impact our waterways. The WVDEP needs to act to protect the people before the profits of industry. With a state like West Virginia, with the abundance of water resources and industries that impact them, simply relying on federal water quality standards is not enough. Most federal standards are not stringent enough to regulate an area as unique as ours, and the WVDEP should act accordingly and apply stronger, not weaker, standards.



WEST VIRGINIA MUNICIPAL WATER QUALITY ASSOCIATION

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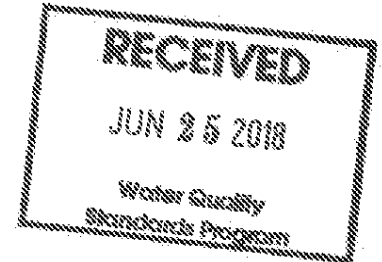
GENERAL COUNSEL

Paul Calamita, AQUALAW

July 21, 2018

By Email (laura.k.cooper@wv.gov)

Ms. Laura K. Cooper
Assistant Director – Water Quality Standards
Division of Water and Waste Management
WV DEP
601 57th Street SE
Charleston, WV 25304



RE: Requirements Governing Water Quality Standards – Supplemental Comments

Dear Assistant Director Cooper:

Please accept the following supplemental comments on the proposed Triennial Review of Water Quality Standards regulation, following up on our comments of June 7. These comments are on behalf of the WV Municipal Water Quality Association (MWQA).

Our initial comments addressed the inclusion of the long-term harmonic mean flow as the design flow for human health criteria. For your convenience the comment stated the following.

DEP's adoption of the harmonic mean flow as the critical design flow for human health criteria effluent limits is required by HB 2506. However, DEP should also clarify that the harmonic mean flow will be used when assessing whether human health-based toxicant-related water quality standards are met instream. It makes no sense to permit point sources using the harmonic mean flow and then assess instream water quality compliance based upon 7Q10 conditions. This is an important clarification that must be made or the legislature is almost certain to take up this issue again.

We also ask that DEP further consider its proposed changes to footnotes three and four of App. E, Table 1. The footnotes, like the section 8.2.b critical design flow harmonic mean provision, apply to the full list of human health criteria. The proposed revision states "Thirty-day average concentration not to be exceeded, unless otherwise noted." A thirty-day average for instream assessments of criteria compliance or other uses simply cannot be reconciled with the long-term harmonic mean use for effluent limits.

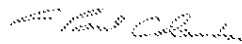
The regulation should carefully maintain consistency among effluent limits, instream water quality assessments, TMDL and other wasteload allocations/load allocations, and any other application of the human health criteria. We believe the

use of an annual average would be an adequate long-term measure, consistent with EPA guidance, and we ask that the two footnotes be reworded as follows.

Annual average criteria concentration not to be exceeded.

In further support, application of the human health criteria as we recommend will be consistent with their current use. For example, there are at least two West Virginia PCB TMDLs (both by EPA) that use as target conditions the long-term instream pollutant concentrations. That is, the TMDLs and wasteload allocations/load allocations are based on maintaining instream concentrations at or below the numeric criteria on annual average bases. They do not include allocations that would be necessary to maintain thirty-day or any other shorter term averages. *Shenandoah River PCB TMDL (2001) (West Virginia and Virginia segments); Flat Fork Creek PCB TMDL (2001).*¹ These EPA TMDLs, which DEP supported, are clearly correct in calculating allocations in a manner consistent with the underlying long term (lifetime) assumptions on which the human health criteria are based (possible carcinogens being based on human health/70 year exposure and accumulation).

Sincerely,



F. Paul Calamita
General Counsel

C: WVMWQA Members
Hon. Austin Caperton
Mr. Scott Mandirola

¹ https://dep.wv.gov/WWE/watershed/TMDL/grpa/Documents/Shenandoah%20Jefferson/14148_shenpcb.pdf Shenandoah River (Virginia & West Virginia);
http://dep.wv.gov/WWE/watershed/TMDL/grpb/Documents/Lower%20Kanawha/2975_FlatFork_Final.pdf Flat Fork Creek;
http://dep.wv.gov/WWE/watershed/TMDL/grpb/Documents/Lower%20Kanawha/2974_FlatFork_DR.pdf Flat Fork Creek Decision Rationale

July 5, 2018

WV Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304
Attn: Laura Cooper

Re: 2019 Triennial Review of Water Quality Standards, 47CSR2

Dear Ms. Cooper,

West Virginia Rivers Coalition, on behalf of our members and the undersigned organizations, respectfully submit the following comments on the WV Department of Environmental Protection's (WVDEP) proposed changes to Rules Governing Water Quality Standards (47CSR2) as part of the 2019 Triennial Review.

Subsection 5.2.h.5, Overlapping Mixing Zones

WVDEP added language to give the Secretary discretion to allow overlapping mixing zones for human health criteria. In its January 26, 2018 letter to WVDEP, EPA recommended that before allowing overlapping mixing zones for human health criteria in an NPDES permit, "WVDEP evaluate the cumulative effects of multiple mixing zones within the same waterbody." The letter goes on to state that, "The potential additive or synergistic effects of certain pollutants could result in the designated use of the waterbody as a whole not being protected." Language should be added to the rule that addresses this issue and requires an evaluation of the cumulative effects of multiple discharges and synergistic effects of pollutants on human health as a condition of the Secretary's approval of overlapping mixing zones.

The proposed language requires compliance with "all guidelines and conditions of this subsection." We request that WVDEP clarify in the rule, or at least in response to comments so that it is a matter of public record, its interpretation of "this subsection." Our assumption is that "this subsection" refers to the entire Section 47-2-5 on mixing zones. This assumption appears to be in line with EPA's comment in their January 26,

2018 letter that a discharger seeking an overlapping mixing zone must still meet all the other requirements in 47-2-5.

House Bill 2506 requires additional signage be displayed at overlapping mixing zones, but the proposed revisions to this rule do not address this requirement. The relevant portion of the bill reads: “At locations where mixing zones are allowed to overlap, the Secretary shall require permittees to indicate on their required signage an indication that mixing zones overlap in a particular vicinity.”

The intent expressed by members of the WV Legislature in including this signage provision in House Bill 2506 is to help protect public health. Mixing zones are areas where safe levels of pollutants harmful to human health are allowed to be exceeded. For this reason, it is ill-advised to come into contact with the water or consume fish harvested in this area. The public must be notified about these risks in order to make informed decisions about their use of the water in these areas through highly visible signage spanning the entire vicinity of the overlapping mixing zone.

WVDEP needs to detail in its rulemaking how this signage requirement is to be implemented, including specific language that must be posted. We recommend the signage should include this statement: “This area has high concentrations of pollutants harmful to human health. Contact with water or consumption of fish in this area can cause severe health effects.”

The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Subsection 8.2.b, Critical Design Flow for Human Health Criteria

The proposed rule changes the critical design flow to the harmonic mean, which would result in an increase in the amount of pollutants discharged in certain NPDES permits. We are concerned that this change does not take into account pollutants for which criteria are based on short-term exposures. For example, EPA has documented that nitrate affects people with short-term exposures and that harmonic mean flow would not be advisable for that pollutant. Federal Register (65 FR 66450).

We recommend that the rule require the appropriate critical design flow for pollutants that affect people over the short term such as nitrate. Also, if and when additional scientific findings document short-term exposure issues for other pollutants, WVDEP should require the appropriate critical design flow for those pollutants as well.

Human Health Criteria

EPA updated its National Recommended Water Quality Criteria for human health for 94 chemical pollutants to reflect the latest scientific information and EPA policies, including updated fish consumption rate, body weight, drinking water intake, health toxicity values, bioaccumulation factors, and relative source contributions. It is important to update these criteria to ensure that WV's Water Quality Standards reflect current science and protect applicable designated uses.

We have requested WVDEP provide us a copy of West Virginia-based fish consumption data that has been referenced by other stakeholders in this Triennial Review process, but to date have not yet received those documents from the agency. Once provided and reviewed, we may choose to submit an addendum to these comments. Our assumption at this point is the West Virginia studies are not as extensive or comprehensive as the EPA studies, so we support WVDEP in relying on use of EPA's default consumption rates.

It is also of relevance that there is a statewide fish consumption advisory for all waterbodies within West Virginia, and that many of our river segments have advisories that recommend severely limiting consumption or not consuming fish at all due to contamination. As pointed out in the current edition of the West Virginia Sport Fish Consumption Advisory Guide, the state's rural and sporting heritage, along with a low per capita income, provides for a resident population with a particular inclination and incentive to catch and keep fish for food. WVDEP's approach to updating human health criteria based on EPA's default consumption rates gives the state's residents a better chance at recovering these rivers and streams so that it is once again safe to eat the fish. This is the vision we should all work towards so that West Virginians may reclaim their right to use their rivers as a source of nutritious food and personal sustenance.

We note while 94 pollutants were updated, WVDEP is choosing to only adopt new criteria for 56 of the recommended pollutants. WVDEP should be proactive and adopt all 94 recommended criteria so that West Virginia has criteria in place should any of the additional pollutants be used in the state. There is no cost in adopting all of EPA's recommended criteria, and the benefit is that protective permits can be written if and when one of these pollutants is proposed to be discharged. Neighboring states, such as

Kentucky and Pennsylvania, have chosen to take this proactive approach. West Virginia should as well.

Notwithstanding the number of pollutants for which EPA's criteria are adopted, we fully support WVDEP's adoption of these new human health criteria as recalculated by EPA — whether they result in criteria that are lower or higher than West Virginia's existing criteria. West Virginia water quality criteria should be based on the best, most recent science available, and it is to be expected that the criteria will be refined periodically as new data and information become available. We commend WVDEP for handling all pollutants in an even-handed way.

Thank you for the opportunity to have these comments considered.

Signed,

Angie Rosser
West Virginia Rivers Coalition

Fred Gerwig
Braxton Citizens' Action

Gary Zuckett
WV Citizen Action Group

Julie Archer
WV Surface Owners Rights Organization

Natalie Thompson
Ohio Valley Environmental Coalition

Jonathan Rosenbaum and Helen Gibbins
League of Women Voters of West Virginia

Larry V. Thomas
West Virginia Highlands Conservancy

April Pierson-Keating
Mountain Lakes Preservation Alliance

Howdy Henritz
Indian Creek Watershed Association

Beth Little
Eight Rivers Council

Allen Johnson
Christians For The Mountains

Eric Engle
Mid-Ohio Valley Climate Action

Mike Becher
Appalachian Mountain Advocates

Jeff Allen
WV Council of Churches



West Virginia Coal Association

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July 10, 2018

Laura Cooper, Assistant Director
West Virginia Department of Environmental Protection
Division of Water & Waste Management
601 57th Street
Charleston, WV 25304
Via Electronic Mail: Laura.K.Cooper@wv.gov

Re: Public Comment Period on Draft Legislative Rule Revisions to 47 CSR 2- State Water Quality Standards

Dear Ms. Cooper:

Pursuant to the public notice published by the West Virginia Department of Environmental Protection (WV DEP), the West Virginia Coal Association (WVCA) offers the following comments regarding the draft revisions to the state's water quality standards rule, 47 CSR 2.

The West Virginia Coal Association (WVCA) is a non-profit state coal trade association representing the interests of the West Virginia coal industry on policy and regulation issues before various state and federal agencies that regulate coal extraction, processing, transportation and consumption. WVCA's general members account for 95 percent of the Mountain State's underground and surface coal production. WVCA also represents associate members that supply an array of services to the mining industry in West Virginia. WVCA's primary goal is to enhance the viability of the West Virginia coal industry by supporting efficient and environmentally responsible coal removal and

processing through reasonable, equitable and achievable state and federal policy and regulation. WVCA is the largest state coal trade association in the nation. Page 47

WVCA's comments focus on two sections of the proposed changes to 47 CSR 2: (1) the proposed changes to the process for certain site-specific criteria applications, and (2) the proposed revisions to the human health water quality criteria.

First, WVCA supports the proposed changes to 47 CSR §2-8.5 to allow for development and approval of certain site-specific criteria during the permitting process. We anticipate that some permittees may receive relief more expeditiously through the permitting process, potentially eliminating years of delay while awaiting federal Environmental Protection Agency (EPA) approval of Legislative rule changes. However, the Notice of Public Comment Period provided by WV DEP indicates that the changes are specific to site-specific criteria for copper. *The actual language in 47 CSR 2-8.5.a indicates that the Water Effects Ratio method may be used for any metals, whereas the use of the Biotic Ligand Model is specific to copper.* We support the use of the permitting process for adoption of site-specific criteria for all metals using the methodology set forth in EPA's *Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals* (February 1994).

Second, WVCA supports the changes to the human health criteria to allow for overlapping mixing zones and for the use of harmonic mean flow. *However, WVCA does not support the proposed revision to the human health criteria for fifty-three organic chemicals.*

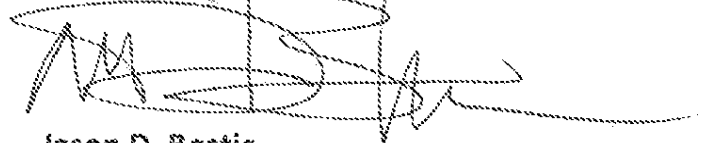
Over the years, WVCA has been adamant that WV DEP must not accept EPA's National Recommended Criteria without a thorough, scientific review to determine whether the criteria were developed properly and are appropriate for application in West Virginia. Repeatedly, we have demonstrated that EPA has exercised poor scientific judgment in establishing certain National Recommended Criteria (aluminum, selenium, etc.). *Yet, DEP proposes to adopt fifty-three revised criteria with nothing but a "rubber stamp", wholesale adoption of EPA's National Recommended Human Health Ambient Criteria for these parameters. This is egregious, considering the struggles WV DEP has endured in the past attempting to correct EPA's past mistakes in the development of water quality criteria.* The blind adoption of federally-developed criteria by WV DEP for implementation in the state is also a serious dereliction of the agency's Legislative-delegated responsibility to implement water quality standards that are specifically appropriate for West Virginia.

At a minimum, WV DEP must recalculate the National Recommended Criteria for these parameters based on West Virginia's fish consumption study. The Survey of West Virginia Residents' Consumption of Fish published in 2008 by Responsive Management (the 2008 Survey) prepared for the WV DEP determined that the fish consumption rate for State residents is lower than the national average. WV DEP has utilized the fish consumption rates from the 2008 Survey in the development of methylmercury criteria. WV DEP should recalculate the human health criteria for the fifty-three organic chemicals utilizing the fish consumption rates from the 2008 Survey.

WV DEP clearly did not consider the potential cost to NPDES permittees facing water quality-based effluent limits for certain parameters that might be orders of magnitude lower than those based on current water quality criteria. This is not the only potential effect. Risk assessments under the WV Voluntary Remediation Program are occasionally based on the risk of migration to surface waters, particularly for organic pollutants. It is not clear whether the lower human health criteria would require reopening of the Certificates of Completion for these properties to reassess the risk based on the lower surface water criteria. These potential costs were not addressed by the agency. We encourage WV DEP to withdraw the proposed revisions to the human health criteria for organic parameters and to perform a full, independent evaluation of the scientific basis for each criterion and its potential fiscal cost prior to their adoption.

WVCA appreciates the opportunity to provide these comments regarding the draft revisions to the state's water quality standards.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "J. Bostic", is written over a horizontal line.

Jason D. Bostic
Vice-President

July 10, 2018

VIA U.S. MAIL & E-MAIL (Laura.k.cooper@wv.gov)

Ms. Laura K. Cooper
Water Quality Standards, DWWWM
WV Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304

Re: Comments on proposed revisions to West Virginia Water Quality Standards, 47 CSR 2

Dear Ms. Cooper:

The West Virginia Department of Environmental Protection, ("DEP") has proposed changes to 47 CSR 2, Requirements Governing Water Quality Standards. The following comments on that proposed rule are submitted by the West Virginia Manufacturers Association ("WVMA"), which represents the interests of hundreds of West Virginia manufacturers and allied businesses.

A. Overlapping Mixing Zones

In 2017 the West Virginia Legislature ("Legislature") adopted a revision to W. Va. Code §22-11-7b(c) which provided, in part, that "the Secretary may allow mixing zones to overlap, but not to go beyond the point one half mile upstream of a public water supply." As proposed by the DEP, this statutory change would be incorporated into 47 CSR 2-5.2.h.5 by rewriting it as follows:

5.2.h.5. Overlap one another, except that the secretary may allow mixing zones for human health criteria to overlap, if the overlapping mixing zones comply with all guidelines and conditions of this subsection.

This suggests that overlapping mixing zones are still subject to the other limitations on mixing zones, such as the prohibitions in subdivision 5.2.e and paragraph 5.2.h.2 that restrict the size of mixing zones. The statutory language is broader, allowing mixing zones to overlap in all circumstances approved by the DEP, except for the area within one-half mile above a drinking water intake.¹

In its January 26, 2018 letter approving the changes made to W. Va. Code §22-11-7b(c), the United States Environmental Protection Agency ("EPA") recommended changing 47 CSR

¹ That half mile protection is already found in paragraph 7.2.a.2, which limits the size of all human health mixing zones upstream of a public water supply, so there is no need for a redundant reference in Section 5 to the half mile limitation, as some may suggest.

2-5.2.h.5 to clarify that "[a] discharger must still meet all the other requirements at W. Va. Code of State Regs. §47-2-5 in order to qualify for a mixing zone, but the wholesale prohibition against overlapping mixing zones no longer applies." EPAs point was that an overlapping mixing zone is not an absolute right, and must be evaluated as to its effect on public water supply intakes before it can be granted. We acknowledge EPAs concern, but believe there may be a better way to achieve that end.

We suggest that the DEP leave paragraph 5.2.h.5 as it is, and amend subdivision 5.2.j, which provides exceptions to the limitations on mixing zones, in the following fashion:

The secretary may waive the requirements of subdivision 5.2.e., paragraph 5.2.h.2, and, for human health mixing zones, paragraph 5.2.h.5, if a discharger provides an acceptable demonstration of:

Subdivision 5.2.j already prohibits any changes to mixing zone size that would overlap public water supplies and bathing areas, or where there would be interference with the use of the water (in this case, as a public water supply). By making this change, the DEP would be putting the overlapping mixing zones on the same footing as limitations on size, such that all physical limitations on mixing zones (spatial and overlap) apply unless the proper demonstration is made to the DEP. That would be the clearest means of assuring that waivers of mixing zone limitations are subject to the same standard and scrutiny.

B. Harmonic Mean Flow

The other change made by the Legislature in 2017 to W. Va. Code §22-11-7b(c) was approval of the use of harmonic mean flow for setting permit limits for human health criteria. In its January 26, 2018 letter EPA noted that it had recommended the use of harmonic mean flow because, "by and large, human health criteria are designed to protect an individual over a lifetime of exposure, and so EPA attempts to match the longest stream flow averaging period (i.e., harmonic mean flow) with the criteria which is protective over a human lifetime." Subdivision 8.2.b would incorporate that change into the water quality standards, and we applaud the DEP for doing so.

C. Human Health Criteria

According to the Acting General Counsels June 1, 2018 Memorandum to the Environmental Protection Advisory Council, "[r]evisions to human health criteria are being made to bring West Virginia standards in line with nationally-recommended water quality criteria." The proposed rulemakings adoption of the EPAs criteria for a number of human health parameters in Appendix E is problematic for several reasons, as discussed below.

EPAs recommended criteria were developed after consideration of how much of a given pollutant is ingested and metabolized by humans eating fish or drinking water in relation to average body weight. EPA uses national default values for both fish consumption and body weight. In West Virginia, both of those national averages distort the relative risk, especially when applied in conjunction to one another.

Several years ago the DEP commissioned a study of how much fish West Virginians actually consume. See Responsive Management, *Survey of West Virginia Residents Consumption of Fish* (2008).² The West Virginia survey establishes that our states residents consume less fish than the national average. Compare EPA-820-R-14-002, *Estimated Fish Consumption Rates for the U.S. Population and Selected Subpopulations* (NHANES 2003-2010) (April 2014).³ Thus, utilization of the national fish consumption rate overstates the exposure risk in light of West Virginias lower consumption rate.

EPA encourages use of state-specific fish consumption data wherever possible, rather than its national default values. EPA stated in its *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health* (USEPA 2000a), and again in the *EPA Response to Scientific Views on Draft Updated National Recommended Water Quality Criteria for the Protection of Human Health* (June, 2015) ("Response to Comments"), that:

because the level of fish intake in highly exposed populations varies by geographical location, EPA suggests a four preference hierarchy for states and authorized tribes to follow when deriving consumption rates that encourages use of the best local, state, or regional data available...EPA strongly emphasizes that states and authorized tribes should consider developing criteria to protect highly exposed population groups and use local or regional data over the default values as more representative of their target population group(s). The four preference hierarchy is: (1) use of local data; (2) use of data reflecting similar geography/population groups; (3) use of data from national surveys; and (4) use of EPA's default intake rates.

We urge the DEP to follow EPAs guidance and rely on the s tate-specific fish consumption data that West Virginia has developed.

The physical characteristics of West Virginians should also be taken into account in developing human health criteria. The default body weight that was assumed by EPA in developing the new proposed criteria is 80 kilograms, or about 172 pounds. Response to Comments at 10. This is an overly conservative, protective number, as the average weight of a U.S. male is 195.7 pounds.⁴ The average West Virginian adult male weighs 202.1 pounds.⁵ In general, West Virginians have a higher body mass index ("BMI") than the national average. Thus, on average, West Virginians are ingesting less fish per unit of body weight than the national average. Accordingly, if the human health criteria in the proposed rule were calculated using the national fish consumption and weight averages, the relative risk to human health would be disproportionately high. The human health risk criterion for West Virginia should be recalculated to reflect the differences in fish consumption and weight/BMI.

² Available at https://dep.wv.gov/WWE/Programs/wqs/Documents/Triennial%20Review/May%2018%2C%202009/17158_Fish_Consumption_Report_2008.pdf.

³ Available at <https://www.epa.gov/sites/production/files/2015-01/documents/fish-consumption-rates-2014.pdf>

⁴ See <https://www.cdc.gov/nchs/fastats/body-measurements.htm>.

⁵ See <http://www.wvdhhr.org/bph/hsc/pubs/other/obesityreport2011/obesityreport2011.pdf>.

In addition to the fish consumption and body weight factors, the WVMA questions whether proper consideration has been given to other aspects of EPAs criteria-setting process, which relies upon compounding conservatism in setting criteria. We believe that EPAs assumption that 3 liters of untreated surface water are ingested daily does not realistically represent West Virginians drinking water consumption. West Virginians are far more likely to be drinking ground water from wells, or treated surface water which is already regulated under the Safe Drinking Water Act, often to levels below EPAs human health criteria. Furthermore, we note that the DEP filed comments in 2014 when human health criteria were being developed by EPA. The DEP identified many potential problems associated with the lower criteria, which are below detection levels in many cases, giving rise to higher analytical costs and greater chance of false positives and violations. DEP should now reconsider its adoption of EPAs recommended criteria in light of those comments.

D. Biotic Ligand Model for Site-Specific Copper Water Quality Criterion

The WVMA supports the changes to subsection 8.5 to allow development of a site-specific criterion for copper using the EPAs biotic ligand model. Such modeling, which can take into account local conditions, represents the best available science and provides flexibility for developing copper limits for NPDES permittees. We commend the DEP for making this change.

E. Fiscal Note

Page 2 of the Notice of Public Comment Period that accompanies the proposed triennial review rule contains the fiscal note that is required by W. Va. Code §29A-3-4. The DEP has declared that the amendments to 47 CSR 2 will not result in any impact on state government revenues or on the state or its residents. We believe that is unlikely, and urge the DEP to fully evaluate the potential costs of its rulemaking.

We understand that it is difficult to precisely quantify the costs and benefits associated with changes to water quality standards, and then convert those to dollars and cents. Nevertheless, we think the effort worthwhile. In particular, the revisions to the human health criteria are substantial, and are certain to result in lower limits on permittees. Treating to meet lower limits (if even technologically possible), and associated costs for increased analytical and sampling expenses, will result in significant expense to West Virginias permit holders. Such expenses are worthy of analysis, and we urge the DEP to undertake a fiscal analysis before finalizing its triennial review.

For all of the above-stated reasons, the WVMA requests that the DEP revise its proposed changes to 47 CSR 2 as discussed above. Please contact me if you have any questions about these comments.

Sincerely,

/s/Rebecca McPhail

President

West Virginia Manufacturers
Association

2001 Quarrier Street
Charleston, WV 25311
(304) 342-2123

Cooper, Laura K

From: Aileen <acurfman@gmail.com>
Sent: Tuesday, July 03, 2018 3:18 PM
To: Cooper, Laura K
Subject: Triennial Review of WV Water Quality Standards (47CSR2)

Dear Ms. Cooper:

This is a letter of comment on proposed changes to West Virginia's Water Quality Standards.

As an outdoor enthusiast, I enjoy swimming and paddling in West Virginia's waters. I oppose two changes in the proposed revision, because they could increase my exposure to toxins in the waters I visit.

1. Change to average, or "harmonic mean" flow instead of low flow in determining discharge limits. According to the EPA's website, "for most pollutants, the measure of a river or stream's low flow is the critical condition for receiving-water flow." This is the national standard. As a West Virginian I am offended that my state government would allow a lower standard and place me at greater risk of coming in contact with toxic amounts of water pollutants.
2. Overlapping mixing zones. When mixing zones overlap, larger amounts of effluents may be present. Interactions also may occur between different pollutants. Human health may be adversely affected. The WV Water Quality Standards should require that any proposed overlapping of mixing zones would be evaluated for these hazards. Like other recreational users, I have no way of knowing if I am enjoying waters that I should avoid because of overlapping mixing zones. If these zones are allowed, the Standards should require signs warning of potentially high levels of pollutants. The signs should explain that people could be harmed by coming into contact with the water, or by eating fish from it. The signs should include highly visible graphics for recreationists like my husband, who doesn't take his reading glasses on our paddling trips.

West Virginia has some of the East's finest waters for fishing and paddling. Swimming in the river also remains a popular pastime throughout the Mountain State. We deserve the cleanest water possible. So do the guests who bring money when they come here for fishing, rafting, kayaking, or a stay in a cabin on the river. Please correct the 2018 revision of the Surface Water Quality Standard to fix these three shortcomings.

Thank you,
Aileen Curfman

Cooper, Laura K

From: April Keating <apkeating@hotmail.com>
Sent: Tuesday, July 10, 2018 11:35 AM
To: Cooper, Laura K
Subject: triennial water quality standards review

To Whom It May Concern:

I am writing to submit comments on the water quality standards review. I am highly concerned about what is in our water, both things we know about and things we don't. Many chemicals in our water have not been identified as hazardous or tested on humans or animals. We do not have the data we need for thousands of chemicals, including many of those in use. A great example is MCHM, a chemical cocktail we knew little about when it was released into our water system, fouling the water and ruining the filters in the water plant as well as the water heaters and pipes in homes in the Charleston area. In a city and state where we rely on chemicals for income and tax money and house at least seven large plants, this puts humans and animals at risk.

It is unacceptable to allow even more chemicals into our water. Clean water is the basis for all life on this planet. Though cancer is the first thing people think of when it comes to chemicals in the water, many chemicals act as endocrine disruptors, which can be as bad as cancer. Children and the elderly are hit harder because their systems are more delicate. Many disorders affect the DNA as well, and can be passed down for generations. This is unacceptable in a state which produces water for 1/3 of the eastern seaboard.

Besides chemicals, there are radionuclides in the water which cause cancer of all types. One that is particularly concerning is radium, which is a bone seeker and causes bone cancer.

<https://en.wikipedia.org/wiki/Radium> Radium is one of the radionuclides found in the Marcellus shale and its flowback water. It makes its way into our water system by illegal dumping or accidental spills. With the amount of heavy water trucks on the road with no labelling, and the practice of spraying roads with "brine" from fracking wells (which surely contains radium), our water has been at risk for at least 12 years. Indeed, a report from the Environmental Working Group showed radium, bromides, and the resulting trihalomethanes which are the result of mixing chlorine with bromides, in Buckhannon's water as far back as 2013. <https://www.ewg.org/tapwater/system.php?pws=WV3304902#.W0TQUuIKIM9>

I was at the public hearing last year at the capitol during session on the lowering of water quality standards and heard the speakers talk. It is ironic that the only ones who supported allowing more chemicals into the water were the coal, gas, and manufacturing lobbies, as well as the WV Chamber of Commerce. These groups have as their sole goal creating profit for their shareholders and boosting business development in the state. Sadly, most of our businesses are fossil fuel related, creating more poison for our water and air, and more profit for a few at the top, not so much for those in the middle or at the bottom. West Virginia has its share of poor, who are preyed upon because they are always in need of a job - ANY job - and what they are offered is poisonous, toxic, and unethical. The tourism industry in this state is bigger than coal, oil, and gas combined, and they spoke against the relaxing of WQ standards.

The WV DEP must always remember its goal of protecting the environment. There are many reasons for this. Some are aesthetic, some are practical, and some are ethical. The DEP has a duty to keep the environment safe. Relaxing WQ standards is not in line with this goal, especially because many of our industries are especially hard on the air and water, public health, and sustainable economic development.

I hope everyone at the DEP will act on their conscience in this matter and do what is best for the state, its people, and the business atmosphere here. Destruction can never be good for business. The environment is all we have. This is my home. Please don't allow profit-seeking companies to do any more damage to it.

Sincerely,
april keating

April Pierson-Keating
Mountain Lakes Preservation Alliance
www.mountainlakespreservation.org
Clean Water Through Clean Energy

Barbara Daniels
23 Scenic Rd.
Craigsville, WV
304 618 3195

Laura K. Cooper
601 57th St. SE.
Charleston, WV 25304
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304 926 0440

July 10, 2018

Water Quality Standards Revision Comments

1, West Virginia code states that *no* pollutants are to be allowed in streams.

2. Harmonic Mean Flow” is therefore now illegally the criteria for where pollutants may be dumped. The DEP says this is the average of all stream flows, flood with drought, making the case that there is enough water in a particular creek to “safely” dilute pollutants at all times. Though such a method for calculating where toxins may be dumped might work for billionaire polluters who can persuade public officials—it won’t work for public health. When a stream is nearly dry, it doesn’t matter how much water was there last spring, it won’t “safely” dilute pollutants now.

3. The 56 known carcinogens on the DEP parameters list do not include all the carcinogens likely to be found in the WV streams:

A. While there are many coal-slurry chemicals on the DEP list, those protected from investigation by patents--and thus not known to be carcinogens--are not. For example, one patented coal-slurry chemical, MCHM, which contaminated the drinking water of nine counties in 2014, is *not* listed there. Yet the fact that coal-slurry chemicals will likely enter West Virginia streams is underscored by the inclusion of at least some of them on the DEP parameters list.

B. High-volume hydrofracturing (hvf) waste chemicals are also likely to be in West Virginia streams and very few are on the WV DEP parameters list. This waste contains at least 28 known carcinogens by 2011 Congressional testimony, plus many more *patent-protected chemicals*. Further, hvf waste has been found by the USGS, in 2014, to contain an average of 452 times the EPA drinking water limit for radium 226 and 228.

Dr. Ronald Bishop at New York State University, meanwhile, has shown that 4-NQO, a controlled chemical manufactured to induce cancer in laboratory rats, is somehow also created underground during fracking. Considered unavailable, this chemical is not on the EPA list of potential carcinogenic pollutants. However, it has *been found in dangerous concentrations in 24 out of 24 randomly-chosen frack waste samples from Pennsylvania and West Virginia*. Colorless and odorless 4NQO is carcinogenic in parts per trillion, a concentration too low for cost-effective monitoring.

At an average of 5 million gallons per frack, hvf waste is disposed on highways as a deicer, (according to a WV Div. Of Highways, Nov. 2011, MetroNews broadcast) and in class II injection wells not designated for hazardous waste. Certified monitoring of injected toxins--and physical testing of class II well integrity--is not done. Because of these disposal methods, plus spills, accidents and surreptitious dumping, hvf chemicals are being recorded in water wells and streams. Such casual disposal methods are legal, though, because the WV DEP has adopted the EPA’s frack-waste exemption from hazardous classification.

When signing the Marcellus Bill, Governor Tomblin publicly noted that hvf was much different from the older fracking methods and posed a problem needing to be fixed--but it never was. Therefore, with gas pipelines to LNG export terminals on the way to completion, fracking and its present enormous waste problem are expected to rise exponentially. How will we protect our water then?

Barbara Daniels

These comments to be shortened for media publication.

July 10, 2018

FROM: Cindy Rank, Upshur County

TO: WV Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304

Attn: Laura Cooper

Re: 2019 Triennial Review of Water Quality Standards, 47CSR2

Laura,

I am unable to be at the public hearing this evening about the proposed revisions to West Virginia Water Quality Standards based on WV DEP's triennial review of our current standards.

As someone who for the past 40 years has been involved with the regulatory agency's promulgation, implementation, and enforcement of water quality standards and regulations meant to protect and enhance the water quality of West Virginia water resources, I fully support the comments submitted by the West Virginia Rivers Coalition on behalf of a dozen plus West Virginia environmental organizations.

Were I to attend tonight's hearing I would highlight the following several points.

1 - I've never been a fan of "mixing zones" and believe the cost required for industries to achieve zero discharge at the end of their discharge pipes is not only reasonable but also defensible as the best guarantee of the long-term health of the receiving streams and the people who depend on and enjoy those water resources.

Having sadly watched that ship sail many years ago, I now encourage you to make every effort to limit the additionally concerning proposal for overlapping mixing zones included in the proposed standards.

Evaluating the cumulative and synergistic effects of pollutants in the proposed overlap zone is essential for the protection of human health and must be a condition of the Secretary's approval of overlapping mixing zones.

2 – From its first introduction as the original "Cancer Creek Bill" in 1991[?], "Harmonic Mean Flow" has never elicited harmonious feelings from many of us, especially those who live in areas dependent on headwater streams that often run very low in dry times. We are not served well by this newer method of calculating average flow as a basis for setting permissible levels of pollutants, nor are short-term exposure risks for some specific pollutants adequately addressed. **These regulations must include discretion for WV DEP to use more protective methods for calculating discharge limits.**

3 – EPA has recommended upgraded human health criteria for 94 pollutants and all 94 should be adopted as has been done in neighboring states. ... I'm reminded that in the early 1990s during WV's consideration of the WV Groundwater Protection Act it was decided that groundwater standards would be adopted based on the most recent recommendations of the EPA as the most reliable and scientifically defensible criteria. I see no reason to not now be proactive and adopt **all** 94 EPA recommended criteria as the most protective of human health, whether or not the pollutants are problematic at the present time.

Thank you and the Division of Water Quality for your long hours of work on these and other water and regulatory issues that face us as a state and nation. WV DEP actions on these proposed water quality standards will be felt for years to come. Please choose the strongest measures available.

Sincerely,

Cindy Rank

Cindy Rank
4401 Eden Rd
Rock Cave, WV 26234

304-924-5802

Smith, Chris B

From: Cooper, Laura K
Sent: Wednesday, June 20, 2018 7:11 AM
To: Smith, Chris B
Subject: Fwd: Triennial Review (47CSR2)

Chris, will you start a Comments folder on Q drive and put this in it? "Print" it as pdf first, so we have it as pdf. Thanks.

Laura K. Cooper
 Assistant Director - Water Quality Standards
 Division of Water and Waste Management
 WV Department of Environmental Protection
 Office: 304-926-0499 x1110
 Mobile: 304-206-8901
 Email: Laura.K.Cooper@wv.gov
 Room 2169, 601 57th St SE; Charleston, WV

Begin forwarded message:

From: Donald Briggs <1donaldbriggs@gmail.com>
Date: June 19, 2018 at 3:24:37 PM EDT
To: Laura.k.cooper@wv.gov
Subject: **Triennial Review (47CSR2)**

Dear Ms. Cooper,

WV Water Quality Standards should, without question, protect and maintain water quality for drinking and outdoor recreation.

1) WVDEP should adopt all 94 criteria published by the EPA's updated National Recommended Water Quality Criteria, reflecting the latest scientific information. It's hard to understand why you believe that State residents deserve the adoption of criteria for only 56. Please adopt all 94 recommended criteria. Most importantly, such would help to support expand the State's \$9 billion outdoor recreation economy.

2) The Secretary should have the ability to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

3) Add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

4) Specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for your consideration.

Laura Cooper
 Water Quality Standards, DWWM
 WV Department of Environmental Protection
 601 57th St. S.E.
 Charleston, WV 25304

Document: 47CSR2 – Water Quality Standards Triennial Review

June 29, 2018

Dear Ms. Cooper,

IDEXX commends the West Virginia Department of Environmental Protection (Department) on developing the proposed changes to the Requirements Governing Water Quality Standards and we appreciate the opportunity to participate in the public comment period. At this time, IDEXX requests the Department to consider the following comment.

1. Recommend amending the Category A and Category C bacteria indicator from fecal coliform to *Escherichia coli* (*E. coli*), listed at Appendix E, Table 1 8.13, applied Statewide.


Rationale: *E. coli* are better indicators for fecal contamination versus fecal coliforms.

Fecal coliform bacteria are commonly identified as being thermotolerant bacteria (able to grow at 44.5°C) [1]. Thermotolerant bacteria consists of *E. coli*, *Klebsiella*, *Enterobacter*, and *Citrobacter* species [1,2]. When testing for fecal coliforms, the population of the bacteria present can affect the fecal coliform results, for example: *Klebsiella*, *Enterobacter*, & *Citrobacter* species are false-positive indicators of fecal contamination as they are from nonfecal origin [2]. It has been found, up to 15% of *Klebsiella* (nonfecal origin) are thermotolerant and up to 10% of *E. coli* are not thermotolerant, thus potentially causing an error rate of 25% when testing for fecal coliforms [3]. *E. coli* is the only bacteria of the coliform bacteria group that comes from the intestinal tract and found to be more specific to the detection of fecal contamination, so much so, that *E. coli* is the definitive indicator of fecal contamination in US drinking water regulations [3,4] and is the recommended bacterial indicator for fecal contamination in recreational fresh water, as part of the 2012 US EPA Recreational Water Quality Criteria recommendations [5].

IDEXX strongly encourages the Department to consider amending the bacteria indicators for waters used for human consumption and recreation contact waters, changing from fecal coliforms to *E. coli*. Changing the bacteria indicators would not only be adhering to the US EPA 2012 recommend criteria for Recreational Water Quality and current US drinking water regulations, which have been updated to *E. coli* for the protection of human health, but using *E. coli* would provide continuity of data with surrounding state shared waters. Most US States have already change their bacteria indicators to follow the US EPA 2012 Recreational Water Quality Criteria, and many States, that haven't changed from fecal coliforms in their regulations, are in the process of revising regulations to update to the indicators that

better correspond to gastrointestinal illnesses, *E. coli* (and/or enterococci for marine contact waters). We appreciate the opportunity to provide these comments and look forward to the next steps in the Triennial Review process.

Respectfully submitted,



Jody Frymire
Regulatory Affairs Associate, Water

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Westbrook, Maine 04092 USA
idexx.com/water
jody-frymire@idexx.com
Tel/Fax: +1 207 556 4840
Mobile +1 207 239 1563

References

1. Warden, Paul; DeSarno, Monique; Volk, Sarah; and Eldred, Bradley. Analytical Services. Evaluation of Colilert-18 for Detection and Enumeration of Fecal Coliform Bacteria in Wastewater Using the U.S. Environmental Protection Agency Alternative Test Procedure Protocol. *Microbiological Methods, Journal of AOAC International*. Volume 94, Number 5: 2011
2. Doyle, Michael. Erickson, Mary. Closing the Door on the Fecal Coliform Assay. *Microbe*, Volume 1, Number 4, page 162: 2006
3. Allen, Martin; Edberg, Stephen; Clancy, Jennifer; Hrudehy, Steve. Drinking water microbial myths. Critical Reviews in Microbiology; ISSN: 1040-841X (print), 1549-7828 (electronic): 2013: <http://informahealthcare.com/mbv>
4. Cummings, Dennis. The Fecal Coliform Test Method Compared to Specific Tests for *Escherichia coli*. IDEXX: <https://www.idexx.com/resource-library/water/water-reg-article9B.pdf>
5. US Environmental Protection Agency. Recreational Water Quality Criteria. Office of Water 820-F-12-058. <https://www.epa.gov/sites/production/files/2015-10/documents/rwqc2012.pdf>

Cooper, Laura K

From: Carrie Kline <kline@folktalk.org>
Sent: Tuesday, July 10, 2018 7:47 PM
To: Cooper, Laura K
Subject: WQ standards

Dear Ms. Cooper,

Thank you for spearheading the triennial review of water quality standards. There is nothing more important than clean water to our efforts to fight depopulation in WV. We're one of two states that are depopulating, and we're way above the other (Michigan). We work in the field of cultural heritage preservation, for tourism and to help develop alternative economies for our state. Young people and new residents consider the vitality and public health of a community when choosing whether to live in WV. People have come and stayed in this state due to clean, rushing rivers. If we contaminate our water, people will not come and not stay, leaving the land to the corporations. We are very concerned about any threat to our states' water, including mountaintop removal mining, gas pipelines, hydraulic fracturing and the Appalachian Gas Storage Hub. We need tight standards and tight reviews with adequate numbers of inspectors. We also question the regulation that ensures DEP staff have worked in industry prior to working for the public good. We consider this too intimate a relationship with industry for the public welfare.

Thank you again.

Sincerely,m
Michael and Carrie Kline

Cooper, Laura K

From: Pamela Moe <pam_moe@hotmail.com>
Sent: Tuesday, July 10, 2018 5:53 PM
To: Cooper, Laura K
Cc: Pamela Moe
Subject: 2019 Triennial Review -- please protect us and our waters using the best protective methodologies and standards

Dear Ms. Cooper,

I ask that you protect our vital waters to the utmost extent possible. I live along the Shavers Fork River in Tucker County and utilize it's waters for drinking, swimming, fishing and other recreational uses. I also utilize and recreate on numerous other waters in our wonderful state.

I ask that you please adopt all 94 criteria to proactively protect human health. Please do not utilize the harmonic mean to calculate discharge limits -- instead utilizing a more protective methodology to limit and protect against the pollutants and toxins from discharges. Please require a close look and evaluations of interactions and cumulative impacts of varying pollutants and their potentially harmful effects to our waters and human health. And, please...keep us all notified as we utilize our outstanding waters with signage letting us know of any waterbody that contains pollutants that may be harmful.

My health, my partners health -- all our health -- in large part, depend on your actions and decisions. Please protect us and our waters using the best protective methodologies and standards.

Thank you for considering my comments.

Sincerely,
Pamela Moe

July 10, 2018

Laura Cooper,

Thanks for an opportunity to submit these written comments on:

“Requirements Governing Water Quality Standards”
W Va Code §§ 22-11-4(a)(16); 22-11-7b

First, I have a critical public safety concern on “Mixing Zones”. These zones **will** contain hazardous concentrations of pollutants. To prevent accidental human exposures, these zones **must be clearly identified with signs** visible both from the water and the shoreline!

I understand these rule revisions are being made to “bring WV standards in line with nationally-recommended water quality criteria”. The rule introduction also states “no economic impacts on the state or its residents”. This rule change must bring **economic benefits** to commercial and industrial interests, given their strong support... in the face of the public's opposition.

Section 3.2 (& 3.2.h, 3.2.i) states that no industrial wastes shall “require an unreasonable degree of treatment for the production of potable water” and no “radiological exposure”. Hydraulic Fracturing practices in WV frequently release brines and radiological wastes to surface waters. Conventional water treatment plants cannot remove ionic brine and most radiologicals from drinking water. Given the DEP rule exceptions generally granted Oil and Gas operations, what assurances are there that WV's drinking water supplies and surface waters will be protected?

Section 4.1.b seems to state that Tier 2 Protection can be waived by the DEP to accommodate “important economic development”. Water quality sufficient for drinking water supply would not be protected, only for fish and recreation uses. Even with the legislature's “Antidegradation Implementation, this seems to put economic interests above Public Health.

Section 5.2.b states that Initial Mixing Dilution Zones are established “at the discretion of the secretary”. This seems to avoid public notice or input from affected parties.

Section 5.2.d states Mixing Zones shall not overlap “water supply intakes or bathing areas”. This will be impossible to verify, unless Mixing Zones are posted with signage.

If you have any questions about these comments, please do not hesitate to contact me.

Philip C. Price, PhD
1391 Nottingham Rd.
Charleston, WV 25314
PhilPrice6@gmail.com

Cooper, Laura K

From: S Vance <shimmervalley@gmail.com>
Sent: Tuesday, July 10, 2018 5:12 PM
To: Cooper, Laura K
Subject: Comments on DEP Water regulations and MVP hazards- need to file a complaint

Dear Ms. Cooper,

I have a large 400 acre parcel in Lewis County which is being severely impacted by MVP. The pipeline route went off of the original route because of steep terrain and the possibility of slips and flooding. In fact, the area just 3 miles south of us, in the same direction that the pipeline is going, on the Braxton/Lewis county line, is on record for one of the worst places for severe storms on the planet.

Burnsville, WV, is the record holder for the following: 14.6 inches of rain in a short period of time. Check out the graph in this article

<https://www.wunderground.com/cat6/deadliest-weather-related-catastrophe-you-probably-never-heard>

MVP has planned to move their pipeline through this area of question. In the back of our valley, which is a major tributary to the Oil Creek, which flows north to Stonewall Dam in Lewis County, the pipeline is expected to go through a massive wetland habitat which is the meeting of 3 mountains. There are bubbling springs everywhere. The land is never dry there and water can be found only a few inches under the dirt. They are going within 400 feet of an established mountain side slip, which is plain stupid.

Given this battle MVP is waging against nature, and the basically preposterous idea that a 42 inch pipeline is going to stay in the ground, only 3 feet under flowing creeks, which have already seen 5 flash floods this spring, and have the road washed out to where MVP cannot currently take trucks into the valley to get to their pipeline, I suggest that the DEP start protecting the water with maximum consideration.

The chances of this pipe washing out are 100%.

The chances that it will permanently contaminate Second Big Run, the Oil Creek and on to Stonewall Reservoir are 100%

The Reservoir is the focus for economy in Lewis County, which otherwise is on the brink of bankruptcy at any given time due to poverty in the area.

Once the water is contaminated, there is no fishing. It is not safe for pregnant women to eat any fish there. Please keep your state laws strong for all future generations.

In general, these pipelines are a bad idea. With the new climate patterns, most of the heavy precipitation from the Gulf is falling on the West side of the Allegheny mountains. It is only going to get worse and with it, increased surface water run off, making life fairly impassable, as it was this past winter.

Please reconsider every single one of the MVP permit creek crossings. Today I got an email from them asking me if they could put a timber mat over two busted culverts, which are over 10 feet high at the crossing point. One culvert is cracked in the middle, and bent up in on itself from the flash flooding in April and May. We had to put T posts in it this weekend and hazard tape on it. Yet they are oblivious to the danger and have stalled 10 months, since I signed my contract with them, to fix it. I would like to file a formal request that they need much more monitoring. You should make the legislature require them to hire more inspectors for your creek protection.

I showed them a 5 foot hole in the culvert from washout flooding in May, that being: verticle 5 feet on top of an earthen bridge. They did not flag it as unsafe and continued to drive over it. now it is completely washed out. We have closed our bridge and they are still trying to avoid fixing it.

It is paramount that the DEP evaluate every thing they are doing as they dont seem to know what their plan is. They told me that I had to measure the water flow and apply for an Army Corp permit, yet they dont seem to be taking any water flow measurements in determining the correct method or size of crossing apparatus needed.

Thank you,

Suzanne Vance, WV licensed Acupuncturist

158 Court Ave

Weston, WV 26452

Cooper, Laura K

From: Tom Rhule <01citizen@gmail.com>
Sent: Tuesday, July 10, 2018 7:58 PM
To: Cooper, Laura K
Subject: Water Quality Standards Revision Comment

laura.k.cooper@wv.gov
304 926 0440

July 10, 2018

Water Quality Standards Revision Comments

This is to voice my own observations regarding three major and longstanding problems the WV DEPs regulation of Water Quality Standards.

1. The State of West Virginias Source Water Assessment & Protection Program ("SWAPP") was dangerously compromised when WV lawmakers promulgated rules requiring local participants to sign non disclosure agreements. These essentially prevent local volunteers from alerting the public and staying properly informed once they become aware of threats to sourcewaters local to their Public Service Districts water supplier through the SWAP Program.

By requiring confidentiality in Public Water Protection Programs, §16-1-9c(b)8 of West Virginia Code effectively prevents participant volunteers from alerting fellow citizens of facilities that may potentially pose a threat to their community sourcewaters. It also prevents knowledgeable watchdog groups from informing citizens local to those potential threats on how to monitor for contaminants specific to the industries being "protected."

I recommend that EPA require the State of WV to discontinue the SWAPP

2. The State of West Virginia has never closed the environmental protection exemptions that Congress passed with regards to oil & gas industry drilling, exploration and production. Historically, Congress passed each of these exemptions in an attempt to "streamline" oversight that was, at that time, considered to be widely duplicated in both Federal and State regulations. Unfortunately, West Virginia was not one of the States that duplicated Federal protections in any way. In fact, since Congress passed those exemptions, State lawmakers have required that West Virginias regulations are no more stringent than the existing Federal loopholes. Thus, theyve handcuffed our environmental protection agents and left our communities unprotected from industry pollution.

The sweeping exemptions from provisions in the major federal environmental statutes intended to protect human health and the environment include the following Federal statutes:

- ☐The Comprehensive Environmental Response, Compensation, and Liability Act
- ☐The Resource Conservation and Recovery Act
- ☐The Safe Drinking Water Act
- ☐The Clean Water Act
- ☐The Clean Air Act
- ☐The National Environmental Policy Act
- ☐The Toxic Release Inventory under the Emergency Planning and Community Right-to-Know Act

I recommend that EPA force the State of WV to either close those loopholes, or rescind WWest Virginias right to regulate ANY industry pursuant to those statutes.

3. It is widely accepted that oil and gas industry operations produce among the worst toxic pollutants of any industry. New York banned horiaontal

hydrofracking after concluding that it cannot be regulated to adequately protect the health, safety, and welfare of its citizens. In fact, during the New York studies of horizontal hydrofracking in other states, one chemical compound, 4-nitroquinoline N-oxide (4-NQO), was consistently encountered in flowback fluids from Marcellus gas wells in Pennsylvania and West Virginia. 4-NQO is not listed on the Toxic Release Inventory under the Emergency Planning and Community Right-to-Know Act because 4-NQO is normally produced only in the laboratory for the primary purpose of inducing cancer experimentally.

Although 4-NQO was discovered in relation to frack waste from WV wells years ago, to this date no studies have been published with respect to what chemical interactions account for its consistent presence in flowback fluids. However, the EPA has recognized that it is carcinogenic and mutagenic in concentrates as low as parts-per-trillion (ppt). Which is far below any West Virginia public water systems monitoring or filtering capabilities.

In EPA's Study of Hydraulic Fracturing and Its Potential Impact on Drinking Water Resources, the Agency found scientific evidence that hydraulic fracturing activities can impact drinking water resources under some circumstances. The report identifies certain conditions under which impacts from hydraulic fracturing activities can be more frequent or severe:

- Water withdrawals for hydraulic fracturing in times or areas of low water availability, particularly in areas with limited or declining groundwater resources;

- Spills during the handling of hydraulic fracturing fluids and chemicals or produced water that result in large volumes or high concentrations of chemicals reaching groundwater resources;

- Injection of hydraulic fracturing fluids into wells with inadequate mechanical integrity, allowing gases or liquids to move to groundwater resources;

Injection of hydraulic fracturing fluids directly into groundwater resources; Page 72

Discharge of inadequately treated hydraulic fracturing wastewater to surface water; and

Disposal or storage of hydraulic fracturing wastewater in unlined pits resulting in contamination of groundwater resources.

In late August, 2011 The West Virginia Department of Environmental Protection issued an emergency rule to increase regulatory oversight of unconventional natural gas drilling. It did so without full consideration of the difference in waste quantity and toxicity produced from unconventional sources of natural gas. It had little idea of the quantity of waste each well would produce. Since that time, the WV DEP has been permitting fracturing fluids to not only be injected into poorly regulated Class 2 injection wells (a number of which have been shut down due to leaking,) the State has also been permitting frack waste to be placed above the aquifer into Subsidence Control wells, improperly classified as "Stormwater."

Note that on or about September 29, 2014, the West Virginia Department of Environmental Protection issued a notice of violation to Antero Resources for a well drilling incident that polluted 12 personal water wells.

The WV-DEP was contacted by Antero Resources about 9 AM September 24th after Antero drilled a well and came in contact with an adjacent well on Antero's Primm Pad. The well and pad are located on Oxford Road, in the West Union area of Doddridge County.

No reports of 4-NQO were generated because the State of WV does not require testing for it.

I recommend that the EPA require WV DEP halt all horizontal drilling permitting until and unless it begins measuring, classifying, handling,

storing, and disposing the waste it produces so that it no longer threatens our water.

Tom Rhule

Cooper, Laura K

From: v jarrell <v_jarrell@yahoo.co.uk>
Sent: Tuesday, July 10, 2018 11:05 AM
To: Cooper, Laura K
Subject: West Virginia DEP

Hello,

I am writing from England, U,K concerning the Triennial Review of Legislative Rule 47-CSR-2, which is being discussed this evening. While I do have some insight into companies and Government legislation it would seem to me its a obvious benefit for everyone to protect and have strong policies in place for keeping a States water supply heathy. Protecting water not only keeps people healthy and the environment clean, wildlife, tourism etc but in the long run practically keeps the cost of health care down. The cost of fines and clean up from pollution spills is lessened. Does it not make sense to protect West Virginias water not only for the benefit of local communities but for the financial and reputation of all companies involved and Government offices. It would seem to me you are cutting corners in the short term but causing yourself and others a bigger cost in the long term. This does not seem a very good policy to me. I have connections with West Virginia and am adding my voice to those who are asking you to please uphold legislation to protect and ensure West Virginia water is brought up to and remains of the highest quality
Virginia Jarrell.

Cooper, Laura K

From: Wayne Keplinger <wkeplinger@yahoo.com>
Sent: Monday, July 09, 2018 10:07 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

RE: Triennial Review (47CSR2)

Dear Ms. Cooper,

I encourage you and the entire staff of the Department to take into account the future when making decisions regarding water quality.

Water is life. Please be sure that any decision regarding water quality will provide future generations, even the seventh generation from now, those who will be living in 2150, with clean water.

The criteria recommended by the West Virginia Rivers Coalition should be considered as the minimum. They are as listed below:

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Wayne Keplinger
Elkins, WV

From: Meade WINTERS <Meadewinters@gmail.com>
Sent: Wednesday, July 11, 2018 7:15 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Meade WINTERS
268 CLAY STREET
CLARKSBURG, WV 26301
3044768444

Smith, Chris B

From: James Bullard <jim@bullardfamily.org>
Sent: Wednesday, July 11, 2018 6:52 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

James Bullard
1359 Gordon Dilley Road
Marlinton, WV 24954
304 799 7345

Smith, Chris B

From: Nancy Vickers <nantz57@yahoo.com>
Sent: Wednesday, July 11, 2018 12:53 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Nancy Vickers
1006 1 Ave.
Montgomery, WV 25136

Smith, Chris B

From: Patricia Vazquez <patvazven@gmail.com>
Sent: Wednesday, July 11, 2018 12:14 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Patricia Vazquez
Taller 791, Ed. 7, apt. 402 - Col. Jardin Balbuena, Del. Venusti Mexico City, ot 15900
5524564919

Smith, Chris B

From: mauricio carvajal <carvaggro666@hotmail.com>
Sent: Tuesday, July 10, 2018 11:57 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

mauricio carvajal
viento norte 4018
santiago, Los Lagos 9291583
7420081

Smith, Chris B

From: Tom France <twf959@earthlink.com>
Sent: Tuesday, July 10, 2018 11:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Tom France
1799 Fort Spring Pike
Fort Spring, WV 24970
8455582872

Smith, Chris B

From: Jennifer Dotson <Jenniferlynn93@hotmail.com>
Sent: Tuesday, July 10, 2018 10:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Jennifer Dotson
5149 Tristin Way
Catlettsburg, KY 41129

Smith, Chris B

From: Tricia Ball <Triciaball09@gmail.com>
Sent: Tuesday, July 10, 2018 10:28 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Tricia Ball
10 Cedarwood Lane
Barboursville, WV 25504

Smith, Chris B

From: Christy Gibson <cgibsonfnp@gmail.com>
Sent: Tuesday, July 10, 2018 10:00 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Christy Gibson
1765 County Rd 121
Proctorville, OH 45669
7248807840

Smith, Chris B

From: Lenore Reeves <lerves@gmail.com>
Sent: Tuesday, July 10, 2018 9:25 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Lenore Reeves
19934 Hickory Stick Ln
Mokena, IL 60448
7087557010

Smith, Chris B

From: Jo Strough <Strough.jo@gmail.com>
Sent: Tuesday, July 10, 2018 9:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Jo Strough
Hess st
Morgantown, WV 26501

Smith, Chris B

From: Jim Kinnison <Jamesck82@yahoo.com>
Sent: Tuesday, July 10, 2018 9:18 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Jim Kinnison
27 Windhaven
Charleston, WV 25302

Smith, Chris B

From: Larry & Evelyn Dadisman <ldadisman@yahoo.com>
Sent: Tuesday, July 10, 2018 8:48 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Larry & Evelyn Dadisman
912 Greendale Dr
Charleston, WV 25302
304-343-1156

Smith, Chris B

From: Celia Buchanan <cannb4592@gmail.com>
Sent: Tuesday, July 10, 2018 8:08 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Celia Buchanan
3726 4th Ave.
Huntington, WV 25702
304-412-5184

Smith, Chris B

From: Sally Egan <sallye0421@aol.com>
Sent: Tuesday, July 10, 2018 8:02 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Sally Egan
910 Sunset Dr.
Bridgeport, WV 26330

Smith, Chris B

From: Eddie Fletcher <spoonmaneddie@gmail.com>
Sent: Tuesday, July 10, 2018 7:59 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms.Cooper,

WV's water is our greatest resource.History in the coal fields of WV is already written.And WV streams tell the story in dark chapters of a legacy of pollution.Everytime we weaken our water regulations the people and mountains of WV have lost.

I am grateful and fortunate enough have wonderful spring water.And my home is fifty feet from a native trout stream(sinking creek,Greenbrier Co)These trout sport the same D.N.A. of there ancestors in the stream for the last many thousand of years.Please help me pass this WV treasure to the next generation. None of the 94 chemicals belong in my spring or trout stream.

Thank you,

Eddie Fletcher
352 childs ln.
Williamsburg WV 24991
304 645 4243
spoonmaneddie@gmail.com

Smith, Chris B

From: Vanessa Reaves <vmcunningham@gmail.com>
Sent: Tuesday, July 10, 2018 7:52 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Vanessa Reaves
512 Jefferson St Apt B
Morgantown, WV 26501

From: Amanda Cox <bakersmitt@gmail.com>
Sent: Tuesday, July 10, 2018 7:46 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Amanda Cox
87 Lakewood Dr.
Asheville, NC 28803
3043953444

Smith, Chris B

From: Patrick Pelletier <Pat_13@frontiernet.net>
Sent: Tuesday, July 10, 2018 7:38 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Patrick Pelletier
Skyline Trl
Harpers Ferry, WV 25425

Smith, Chris B

From: Kati Holland <kati.bailey8@gmail.com>
Sent: Tuesday, July 10, 2018 7:37 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Ms. Cooper,

As a WV citizen for nearly 30 years, I'm tired. I love it here but every time our state chooses industry over people, it makes it hard to stay.

I got my undergrad and graduate degree here in state and currently practice in medicine here. I love it for many reasons, but water quality is something that makes me think twice about raising a family here.

Please, remember that water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider adopting the EPA's water quality criteria - we need this protection!
Mixing zones also need to be tested and thoroughly examined before making us the experiment.

I beg you.. Choose us, the people, over industry today.

Kati Holland
1127 12th St
Huntington, WV 25701
3045449319

Smith, Chris B

From: D'Onofrio D'Onofrio <bigadfromlb@comcast.net>
Sent: Tuesday, July 10, 2018 7:10 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

D'Onofrio D'Onofrio
25118 Smith Grove Rd
North Dinwiddie, VA 23803
8048612390

Smith, Chris B

From: Jacob Ott <Wvotter@gmail.com>
Sent: Tuesday, July 10, 2018 7:05 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Jacob Ott
171 palm beach ave
White sulphur springs, WV 24986
3046678337

Smith, Chris B

From: Marvin Strathman <plybon72@aol.com>
Sent: Tuesday, July 10, 2018 6:59 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Marvin Strathman
332 B Howells Mill Road
Ona, WV 25545
304-743-1009

Smith, Chris B

From: Jennifer Edelen <elvenmommy3@yahoo.com>
Sent: Tuesday, July 10, 2018 6:50 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Jennifer Edelen
6304 Hanses Dr
Louisville, KY 40219
5025280037

From: Brenda Powell <brown26101@yahoo.com>
Sent: Tuesday, July 10, 2018 6:39 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments. My name is Brenda Powell and I live in Vienna, WV which is a community of 12,000 people along the Ohio River.

I would like to start off with letting you know that I feel this meeting needs to be a live stream on FB so everyone across the state has the opportunity to know what is discussed at this meeting.

This issue I have as a great concern is the acceptable levels that the EPA and the WVDEP allows. The high/low levels, short or long-term exposure are to be addressed.

No levels are acceptable with any chemicals or any contaminate for people or wildlife because of the diseases they can cause.

The WV DEP picking and choosing what they will or will not accept according to what the EPA has submitted as safe is not acceptable to me.

This is just the tip of the iceberg in regards to what the EPA tests for and levels allowed along with 3rd nonregulatory contaminate that are tested in our municipal drinking water every 3 to 5 years. What about in between we can be exposed to. I was told the EPA does not have the funds for testing more often.

Let me say C8 and GenX is a 3rd nonregulatory contaminate among many other we have here in our area. I for one do not accept the levels that are introduced in any way because of the health of the people exposed.
Thank you.

Brenda Powell
1409-31st Street
Vienna, WV 26105
304-295-9573

Smith, Chris B

From: debra jarrell <debbiejarrell@gmail.com>
Sent: Tuesday, July 10, 2018 6:28 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

West Virginia needs stricter enforcement for their water, not less.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments,

debra jarrell
PO Box 49
Rock Creek, WV 25174
3048541830

Smith, Chris B

From: Skip Flynn <skip1577@gmail.com>
Sent: Tuesday, July 10, 2018 6:18 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

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Thank you for this opportunity to provide comments,

Skip Flynn
1577 McCoy Road
Huntington, WV 25701
646-808-7408

Smith, Chris B

From: Carla Seamonds <cseamonds@gmail.com>
Sent: Tuesday, July 10, 2018 6:11 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Carla Seamonds
517 10Th Avenue
Hunter, WV 25701
304/638-7260

Smith, Chris B

From: Esther Murphy <esther_murphy@comcast.net>
Sent: Tuesday, July 10, 2018 6:02 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. I believe that it is vital for the health of the community that you consider the following recommendations to ensure public health and recreational safety for all West Virginians.

Human Health Criteria:

I support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments.

Sincerely,

Esther Murphy

Esther Murphy
134 Reachcliff Dr.
Shepherdstown, WV 25443
304 876-8133

Smith, Chris B

From: Robin Blakeman <rbrobinjh@gmail.com>
Sent: Tuesday, July 10, 2018 5:55 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I offer the comments below, and would also like to state that - due to the ORSANCO Commission's recent proposed changes to their pollution control setting standards role within the Ohio River Watershed - it is absolutely essential that our state DEP step up and do the utmost to protect all of our waterways in this state! My entire immediate family depends upon these waters, so I am highly concerned.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

-Robin Blakeman
rblakin@gmail.com
304-840-4877

Stewardship of Creation Enabler, Presbytery of West Virginia
www.wvpresbytery.org/ministries/committees-affinity-groups/stewardship-of-creation-ministry-team/

Please note: If you are sending me a message related to OVEC, ORCA or WVIPL work, please use this address from now on: robin@ohvec.org

Ohio Valley Environmental Coalition Project Coordinator
www.ohvec.org

WV Interfaith Power and Light Steering Committee
<https://www.facebook.com/WVIPL>

Ohio River Citizens' Alliance Co-Coordinator
<https://www.facebook.com/Ohio-River-Citizens-Alliance-468884539967910/>

When we heal the earth, we heal ourselves. ~David Orr

Please consider the environment before printing this e-mail

Smith, Chris B

From: Danielle Snidow <Uncorkandcreate@yahoo.com>
Sent: Tuesday, July 10, 2018 5:51 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Danielle Snidow
419 Lynnhaven Drive
Charleston, WV 25302
304-552-3331

Smith, Chris B

From: Larry Snidow <Larrysnidow@yahoo.com>
Sent: Tuesday, July 10, 2018 5:49 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Larry Snidow
419 Lynnhaven
Charleston, WV 25302
304 549 1984

Smith, Chris B

From: Daniel Taylor <danotbob@gmail.com>
Sent: Tuesday, July 10, 2018 5:42 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Daniel Taylor
1529 Lee St. East, Apt. C
CHARLESTON, WV 25311
3045219865

Smith, Chris B

From: Sherry Sturman <sherry.sturman@gmail.com>
Sent: Tuesday, July 10, 2018 5:41 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Sherry Sturman
145 BERRIDGE DR
SHEPHERDSTOWN, WV 25443
3044333681

Smith, Chris B

From: Daniel Pratte <Dwpratte@gmail.com>
Sent: Tuesday, July 10, 2018 5:38 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Daniel Pratte
1004 Tanner Hill Road
Tanner, WV 26137
3044628549

Smith, Chris B

From: Stephanie Hysmith <stephaniejhysmith@gmail.com>
Sent: Tuesday, July 10, 2018 5:29 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

In 1935 DuPont crafted this slogan, "Better Things for Better Living ... Through Chemistry." Plastics were going to make everyone's lives easier. In 1938 they introduced nylon, a product supposedly made out of coal, air and water. After WWII plastics became more and more popular. DuPont had created various products for the troops, including plastic wrap, vinyl and Teflon, the latter used to coat the valves and seals of the Manhattan Project's uranium enrichment equipment. In order to make these innovative products available to the consumer, DuPont built their Washington Works plant in 1948.

In the early 1950s, Columbia University scientists were already becoming concerned about health defects caused by these unregulated chemicals, finding vinyl, plastic wrap and Teflon possibly, perhaps probably, carcinogenic. In 1954, internal company documents reported that C8, the substance which makes Teflon non-stick might be toxic.

Recently, our Federal Government voiced concerns that revealing the toxic quality and ubiquity of C8 to the public might cause widespread panic. Well, I've been following the story of C8 since it started finally being addressed in the 1990s. The fact that this chemical, which has caused horrific birth defects to both humans and other animals, and various forms of cancer, was known to be toxic for almost 65 years is beyond any reasonable comprehension. If no one panics now, when will we start?

Why would the DEP not test for all 94 possible pollutants? We've allowed DuPont to pollute the Ohio River and from there, the Mississippi and the oceans. Are you testing for C8? It seems incomprehensible that water, the sole resource that allows life on earth, would not be protected at all levels and in all forms. Please do your best for West Virginia's water.

Thank you for this opportunity to provide comments,

Stephanie Hysmith
1568 Quarrier St
Charleston, WV 25311
3044004368

Smith, Chris B

From: Leslee McCarty <Leslee@mntwaters.com>
Sent: Tuesday, July 10, 2018 5:24 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Why are surrounding states going with the full list and we have only about half?! No wonder we are last in so many categories! Do we want to be first in water pollution?!

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments.

Leslee McCarty
1816 Old Powell Road
Lewisburg, WV 24901
304-646-7563

Smith, Chris B

From: Becky Park <rebeccamasonpark@gmail.com>
Sent: Tuesday, July 10, 2018 5:17 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Thank you for the opportunity to comment on the protecting the quality of our water in West Virginia and the United States.

West Virginia is the source of rivers for so many communities downstream. I urge you to adopt all 94 pollutant limits recommended by the EPA.

Please take every measure to make our rivers clean for fish that we can safely eat, for swimming, for intakes to community water systems.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

This would include NOT using harmonic mean to measure critical design flow. In your review, please advocate for the flexibility to provide the most protective method for calculating discharge limits.

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Thank for making every effort to protect WV waters for those downstream but even more important, for the citizens of our state.

Becky Park
943 Mathews Ave
Charleston, WV 25302
3045535603

Smith, Chris B

From: Deb Vensel <debvensel@sbcglobal.net>
Sent: Tuesday, July 10, 2018 5:17 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Deb Vensel
1248 Anthony Ridge Rd.
Frankford, WV 60134

Smith, Chris B

From: Tammy Young <Tam42young@yahoo.com>
Sent: Tuesday, July 10, 2018 5:10 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Tammy Young
Maple ave
Fayetteville, WV 25840
3046405797

Smith, Chris B

From: Mark Buchanan <MBuchanan304@icloud.com>
Sent: Tuesday, July 10, 2018 5:08 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Mark Buchanan
233 Daugherty Drive
Barboursville, WV 25504
304-412-3287

Smith, Chris B

From: Olga Gioulis <olgagioulis@yahoo.com>
Sent: Tuesday, July 10, 2018 4:56 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations for all West Virginians.

Human Health Criteria:

I support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. Please adopt all 94 recommended criteria.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts.

Thank you for this opportunity to provide comments,

Olga Gioulis
268 N Hill Road
Sutton, WV 26601
26601

Smith, Chris B

From: Gavin Ward <Gavinward2000@gmail.com>
Sent: Tuesday, July 10, 2018 4:53 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Gavin Ward
703 Laurel road
Charleston, WV 25314
3043829901

Smith, Chris B

From: Jerry Carson <jcarson1@suddenlink.net>
Sent: Tuesday, July 10, 2018 4:52 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jerry Carson
5215 beechcrest dr
cross lanes, WV 25313
3047761422

Smith, Chris B

From: Anna Jasiukiewicz <irbis77@wp.pl>
Sent: Tuesday, July 10, 2018 4:52 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments.

Anna Jasiukiewicz
 ul. Wroc?awska 30
 Ostrów Wielkopolski ostrowski, ot 0
 555555555555

Smith, Chris B

From: Andrew Wadsworth <andywadsworth23@hotmail.com>
Sent: Tuesday, July 10, 2018 4:51 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Andrew Wadsworth
125 W 33rd Street
Reading, PA 19606

Smith, Chris B

From: Ben Badger <badger_benjamin@yahoo.com>
Sent: Tuesday, July 10, 2018 12:42 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Ben Badger
216 Eastland Ave
Morgantown, WV 26505
3045985954

Smith, Chris B

From: Logan Bockrath <Logan.bockrath@gmail.com>
Sent: Tuesday, July 10, 2018 12:38 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Logan Bockrath
62 Cashion St
Ansted, WV 25812

Smith, Chris B

From: Nora Davidson <tigers@islandnet.com>
Sent: Tuesday, July 10, 2018 12:37 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Nora Davidson
2956 Delphi Ct NE
Bremerton, WA 98311
2505582781

Smith, Chris B

From: Chuck Nelson <appmountains88@gmail.com>
Sent: Tuesday, July 10, 2018 12:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Chuck Nelson
140 Deer Haven Dr.
Glen Daniel, WV 25844
3042077000

Smith, Chris B

From: Mary Shamburg <K9s4me1964@yahoo.com>
Sent: Tuesday, July 10, 2018 12:30 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Mary Shamburg
5124 Vernon Road
Flatwoods, WV 26621
304-765-9414

Smith, Chris B

From: Jenni Kovich <jjkov1ch-charity@live.com>
Sent: Tuesday, July 10, 2018 12:25 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jenni Kovich
50 Dud Bennett Rd
Leon, WV 25123

Smith, Chris B

From: M Miller <mrmck@yahoo.com>
Sent: Tuesday, July 10, 2018 12:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

M Miller
606 Cely Rd
Easley, SC 29642
864-236-4110

Smith, Chris B

From: Nancy Bevins <celticfrau@aol.com>
Sent: Tuesday, July 10, 2018 12:13 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians:

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Nancy Bevins
424 Trainer Road
Buckhannon, WV 26201
(304) 472-5267

Smith, Chris B

From: Pat Hamlin <pkhods@earthlink.net>
Sent: Tuesday, July 10, 2018 12:12 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Pat Hamlin
707 Morris Ave
Friendsville, MD 21531
3017465012

Smith, Chris B

From: Marianne Deaver <deaverart@gmail.com>
Sent: Tuesday, July 10, 2018 12:11 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Marianne Deaver
7898 Moncove Lake Rd.
Gap Mills, WV 24941

Smith, Chris B

From: Rosemarie Jowdy <rosejowdy@gmail.com>
Sent: Tuesday, July 10, 2018 12:11 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Rosemarie Jowdy
514 Rainbow Ridge Road
Faber, VA 22938
8042412692

Smith, Chris B

From: Holly Cloonan <Hacloonan@gmail.com>
Sent: Tuesday, July 10, 2018 12:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Holly Cloonan
1003 Circle Road
Charleston, WV 25314
304-344-8346

From: Bob Bousquet <bousquetrb@comcast.net>
Sent: Tuesday, July 10, 2018 12:05 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Bob Bousquet
PO Box 101
Bryantville, MA 2327
5555555555

Smith, Chris B

From: Alexya jo Skibo <adskibo@comcast.net>
Sent: Tuesday, July 10, 2018 12:04 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Alexya jo Skibo
Upland Rd
Wheeling, WV 26003
304-242/2468

Smith, Chris B

From: Iris Hunt <wildside@shentel.net>
Sent: Tuesday, July 10, 2018 11:58 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Iris Hunt
2891 Deepwater Mtn. Rd.
Fayetteville, WV 25840
3044692064

Smith, Chris B

From: Kenneth Gfroerer <keng4rivers@gmail.com>
Sent: Tuesday, July 10, 2018 11:57 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Kenneth Gfroerer
377 Meadow Run
Pittsburgh, PA 15243
724-593-5222

Smith, Chris B

From: Terence Hunt <rustic13@shentel.net>
Sent: Tuesday, July 10, 2018 11:57 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments,

Terence Hunt
2891 Deepwater Mtn. Rd.
Fayetteville, WV 25840

Smith, Chris B

From: Karen Arbogast <ksarbogast@comcast.net>
Sent: Tuesday, July 10, 2018 11:56 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

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Thank you for this opportunity to provide comments,

Karen Arbogast
214 Main Street
Cass, WV 24927
814-371-1454

Smith, Chris B

From: Susan Cleaver <suzcleaver26339@hotmail.com>
Sent: Tuesday, July 10, 2018 11:51 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Human Health Criteria:

Please add special protective discretion for determining safe limits of chemicals that may be harmful even during a short exposure.

Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank You, Susan Cleaver

Susan Cleaver
1625 Nazareth Farm Rd., Center Point
Salem, WV 26426
3047823771

Smith, Chris B

From: Susan Kelley <skelley1236@gmail.com>
Sent: Tuesday, July 10, 2018 11:51 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Susan Kelley
612 Katy Road
Fairmont, WV 26554
3048256467

Smith, Chris B

From: Kathryn Herlihy <herlihykd@gmail.com>
Sent: Tuesday, July 10, 2018 11:51 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Kathryn Herlihy
138 Summit Woods Drive
MORGANTOWN, WV 26508

Smith, Chris B

From: David Billups <davidtbillups@gmail.com>
Sent: Tuesday, July 10, 2018 11:40 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

David Billups
1050 Valley View Ave lot 9
Morgantown, WV 26505
(804) 767.0690

Smith, Chris B

From: Megan Hamilton <howdymegan@gmail.com>
Sent: Tuesday, July 10, 2018 11:34 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Megan Hamilton
203 Old Court Street
Fayetteville, WV 25840
304-546-1212

Smith, Chris B

From: Raquel Sosnowski <rsosnowski10@gmail.com>
Sent: Tuesday, July 10, 2018 11:15 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Raquel Sosnowski
1121 N Kensington St. Apt 6
Arlington, VA 22205

Smith, Chris B

From: Brian Deweese <Brianmdeweese@yahoo.com>
Sent: Tuesday, July 10, 2018 11:10 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Brian Deweese
64 Dewey Dr
Elkview, WV 25071

Smith, Chris B

From: Jerry Rivers <jerry.rivers13@yahoo.com>
Sent: Tuesday, July 10, 2018 11:09 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Jerry Rivers
8-Gombert Place
Roosevelt, NY 11575
516-670-4461

Smith, Chris B

From: Mary Hawkins <me@czarina.tv>
Sent: Tuesday, July 10, 2018 10:58 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Mary Hawkins
315 E 12th St, Apt A
New York, NY 10003
2125335312

Smith, Chris B

From: Dave Ruediger <druedig@yahoo.com>
Sent: Tuesday, July 10, 2018 10:51 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Dave Ruediger
64 Weeping Willow Run
Parsons, WV 26287
304-747-8412

Smith, Chris B

From: Suzanne kruger <soozikruger@yahoo.com>
Sent: Tuesday, July 10, 2018 10:47 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Suzanne kruger
60 Huckleberry Ln
Harpers Ferry, WV 25425
13047281339

Smith, Chris B

From: Bonnie Pielach <pielac2000@gmail.com>
Sent: Tuesday, July 10, 2018 10:41 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Bonnie Pielach
P.O. Box 462
Rahway, NJ 07065
7186007795

Smith, Chris B

From: Janet Keating <keatingjanet49@gmail.com>
Sent: Tuesday, July 10, 2018 10:40 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I need clean, safe water to survive. So does my whole family and community. You have a responsibility to ordinary citizens to make sure that they all have access to clean, potable water. Without it, the quality of our lives is diminished. Don't let polluting industries profits come before people and other life forms. I concur with WV River's Coalition's point of view. There is only one way to treat water and that is with great care.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Janet Keating
 126 Shockey Drive
 Huntington, WV 25701
 304-360-4201

Smith, Chris B

From: Donna Becher <2bechers@gmail.com>
Sent: Tuesday, July 10, 2018 10:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I spoke at a couple public hearings in the legislature on these bills last year. Being a new resident of WV, I implore you to look toward a future of clean, safe water for all citizens of this beautiful state. I can't share data, I am not eloquent, but I beg you to implement Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Donna Becher
10 Arlington Court
Charleston, WV 25301
859-380-9493

Smith, Chris B

From: Donna Becher <2bechers@gmail.com>
Sent: Tuesday, July 10, 2018 10:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

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Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Donna Becher
10 Arlington Court
Charleston, WV 25301
859-380-9493

Smith, Chris B

From: Ginny Pendas <lazygin@bellsouth.net>
Sent: Tuesday, July 10, 2018 10:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments.

Ginny Pendas
311 Balsam St
Palm Beach Gardens, FL 33410
5613150809

Smith, Chris B

From: Lloyd Aultman-Moore <aultmanmoore@frontier.com>
Sent: Tuesday, July 10, 2018 10:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Lloyd Aultman-Moore
57 West Street
Westover, WV 26501

Smith, Chris B

From: Robert Stanley <robert-stanley@mocs.utc.edu>
Sent: Tuesday, July 10, 2018 10:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

We should do all that we can to make sure that the streams of WV have as little pollution as possible. Our streams should have water that is not harmful to human beings or to animals. Please do all in your power to make this desirable situation a reality.

Thank you for this opportunity to provide comments,

Robert Stanley
1414 Continental Drive, Apartment 1005
Saint Marys, WV 26045
423-266-3198

Smith, Chris B

From: John Rossbach <john@johnrossbach.com>
Sent: Tuesday, July 10, 2018 10:38 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Protect West Virginia's water quality!

Limit all 94 pollutants updated by EPA.

Get TOUGHER on discharge limits for pollutants.

Overlapping Mixing Zones make no sense for our population.

John & Joyce Rossbach
205 Davis & Elkins St.
Elkins, WV 26241

John Rossbach
205 Davis and Elkins St.
Elkins, WV 26241
304 637 3588

Smith, Chris B

From: Herb Myers <hesemyers@gmail.com>
Sent: Tuesday, July 10, 2018 10:30 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Herb Myers
475 Blizzards Gate Road
Harman, WV 26270
3042274661

Smith, Chris B

From: Alice Vance <abjvance@hotmail.com>
Sent: Tuesday, July 10, 2018 10:28 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Alice Vance
2098 Sweedlin Valley Rd.
Brandywine, WV 26802
3042496223

Smith, Chris B

From: Frederick Ripley <fjripley68@gmail.com>
Sent: Tuesday, July 10, 2018 10:25 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Frederick Ripley
PO Box 21491
Columbus, WV 43221
2707533104

Smith, Chris B

From: David Bott <dwibott@comcast.net>
Sent: Tuesday, July 10, 2018 10:25 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

David Bott
124 Ohio Avenue
Morgantown, WV 26501

Smith, Chris B

From: Michelle Pancake <plasticafantastica@gmail.com>
Sent: Tuesday, July 10, 2018 10:24 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments.

Michelle Pancake
8079 State Route 259
Lost River, WV 26810

Smith, Chris B

From: Joshua Kucharski <jmk527@gmail.com>
Sent: Tuesday, July 10, 2018 10:22 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Joshua Kucharski
374 Walnut Ave SW
Roanoke, VA 24016
4127261651

Smith, Chris B

From: Peter Schumacher <pschu9@gmail.com>
Sent: Tuesday, July 10, 2018 10:20 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Peter Schumacher
2335 Burton Run Rd
Pennsboro, WV 26415
3043772329

Smith, Chris B

From: John Brady <jkbrady@mac.com>
Sent: Tuesday, July 10, 2018 10:17 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

John Brady
77 Singletree Dr.
Shepherdstown, WV 25443
304-876-2516

Smith, Chris B

From: Kurt Ramos <kurtr1926@Hotmail.com>
Sent: Tuesday, July 10, 2018 10:15 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians. West Virginians have been through more than enough suffering and environmental degradation. They deserve to have clean rivers to enjoy swimming, kayaking, and fishing in.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Kurt Ramos
2834 Curry Woods Drive
Orlando, FL 32822

Smith, Chris B

From: Pam Leonard <leo9999@embarqmail.com>
Sent: Tuesday, July 10, 2018 10:14 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Pam Leonard
Bergoo road
Mount Vernon, OH 43050
304-847-7731

Smith, Chris B

From: Connie Sayles <cgsayles@gmail.com>
Sent: Tuesday, July 10, 2018 10:13 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Connie Sayles
3372 Magnolia Ct.
Huntington, WV 25704
681 378 8196

Smith, Chris B

From: Lucy Duff <lucyduff@comcast.net>
Sent: Tuesday, July 10, 2018 10:11 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

West Virginia was my first home and remains my second home. In the course of my first job, in McDowell County, I saw some very dirty streams; now I hear that's still what people are living with in our southernmost counties, and other parts of coal country. Let's do what's needed to make all WV streams clean enough for safe swimming and fishing. Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Lucy Duff
9210 Fowler Ln
Lanham, MD 20706
301 577 2350

Smith, Chris B

From: Emily Carlson <emilyncarlson@gmail.com>
Sent: Tuesday, July 10, 2018 10:08 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Emily Carlson
309 E Rd
Arthurdale, WV 26520
570-506-1207

Smith, Chris B

From: Andrew Rhodes <arhodes5@mix.wvu.edu>
Sent: Tuesday, July 10, 2018 10:06 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am an avid outdoorsman participating in sports from hiking, trail running, climbing, biking, fishing, and hunting. All of these activities depend on the beauty and health of our water ways in WV. Please protect our water quality in the state to promote ecotourism, outdoor adventures, and general and human health.

Please update the Water Quality Standards (WQS) to include all 94 recommendations from the EPA. By including all 94 -- instead of the currently proposed 56 --- we can preemptively protect our environment for the betterment of our community.

While individual chemicals are limited for human health, overlapping mixing zones may also cause potential human health impacts. Please add language to require evaluation of overlapping mixing zones as recommended by the EPA.

Most importantly, if any overlapping mixing zones exist, it is extremely important that the public know about it. This is best accomplished with signage containing language informing the community of possible high levels of pollutants and that contact with water or consumption of fish harvested in the area could have severe negative health impacts. We must protect the public and environmental health. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English. The world includes people of many nationalities, languages, and cultures, but above all, we are all human.

Water is the most basic necessity of life. We are the most advanced nation on the planet. It is paramount that we have clean water for the support of life and humanity.

Thank you for this opportunity to provide comments,

Andrew Rhodes

Andrew Rhodes
604 Elmina St.
Morgantown, WV 26501
304-692-5945

Smith, Chris B

From: Ruth Smith <ruthsansomsmith@gmail.com>
Sent: Tuesday, July 10, 2018 10:05 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Ruth Smith
3165 McCoy Road
Huntington, WV 25701
3046332284

Smith, Chris B

From: Salt Salt <zelkovapress@gmail.com>
Sent: Tuesday, July 10, 2018 10:04 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Salt Salt
1 Nomain St
Coventry, RI 02816
4015551111

Smith, Chris B

From: Jeff Feldman <jfeld33@aol.com>
Sent: Tuesday, July 10, 2018 10:00 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jeff Feldman
63 Sialla Way
Martinsburg, WV 25404

Smith, Chris B

From: Amanda Chenoweth <woodlandgem@gmail.com>
Sent: Tuesday, July 10, 2018 10:00 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments, Amanda Chenoweth

Amanda Chenoweth
9247 Rt. 20 South Rd.
French Creek, WV 26218
3045177398

Smith, Chris B

From: James Wood <aquaticmind@gmail.com>
Sent: Tuesday, July 10, 2018 9:55 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality is important for human health and prosperity. Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

James Wood
120 Maple ave
Wheeling, WV 26003
828-292-6800

Smith, Chris B

From: Elaine Eudy <alpha_b@bellsouth.net>
Sent: Tuesday, July 10, 2018 9:54 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Elaine Eudy
2501 remain way
Atlanta, GA 30344
4047618004

Smith, Chris B

From: Susan Rogers Rosenblum <Susanirene3@gmail.com>
Sent: Tuesday, July 10, 2018 9:51 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

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Thank you for this opportunity to provide comments,

Susan Rogers Rosenblum
PO Box 2256
Elkins, WV 26241

Smith, Chris B

From: Sarah Hafer <sarah.hafer@gmail.com>
Sent: Tuesday, July 10, 2018 9:49 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Sarah Hafer
12111 NE 4th St
Vancouver, WA 98684
9163849551

Smith, Chris B

From: John Henry <jphenry2126@gmail.com>
Sent: Tuesday, July 10, 2018 9:47 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

John Henry
18 Round Taber Court
Morgantown, WV 26508
3042961017

Smith, Chris B

From: Brad Smith <bradandkim6548@aol.com>
Sent: Tuesday, July 10, 2018 9:44 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Brad Smith
222 Woods Run
Slatyfork, WV 26291
304 339 4189

Smith, Chris B

From: Carissa Herman <carissa.l.herman@gmail.com>
Sent: Tuesday, July 10, 2018 9:42 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments, Carissa Herman

Carissa Herman
112 Creekside Dr.
Morgantown, WV 26501

Smith, Chris B

From: Elizabeth Rhodes <drhodeselvin@gmail.com>
Sent: Tuesday, July 10, 2018 9:41 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Elizabeth Rhodes
PSC41 Box504
APO, AE 09464
843-305-9311

Smith, Chris B

From: Kathy Dewitt <kabjdewitt@gmail.com>
Sent: Tuesday, July 10, 2018 9:41 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Kathy Dewitt
1059 Cannon Rd
Bruceton Mills, WV 0
304-379-8536

Smith, Chris B

From: Wolfgang Baudler <wbaudler@gb.nrao.edu>
Sent: Tuesday, July 10, 2018 9:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Wolfgang Baudler
829 N Fork Loop
Green Bank, WV 24944

Smith, Chris B

From: Ellen Lachewitz <ellenlachewitz@gmail.com>
Sent: Tuesday, July 10, 2018 9:32 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Ellen Lachewitz
381 Biser Street
Berkeley Springs, WV 25411

Smith, Chris B

From: Jon DeBoer <nbd53@yahoo.com>
Sent: Tuesday, July 10, 2018 9:29 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jon DeBoer
8823 Michaux Lane
Richmond, VA 23229
8045036512

Smith, Chris B

From: JB Witten <motrout@aol.com>
Sent: Tuesday, July 10, 2018 9:27 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

JB Witten
57
e, WV 26241
304

Smith, Chris B

From: Madison Ball <madison@cheat.org>
Sent: Tuesday, July 10, 2018 9:25 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments.

Madison Ball
127 N. Price St.
Kingwood, WV 26537
6168087486

Smith, Chris B

From: Francis Slider <fslider@frontier.com>
Sent: Tuesday, July 10, 2018 9:24 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments.

Francis Slider
Rt.1, Box 163-A2
Middlebourne, WV 26149
304-771-2150

Smith, Chris B

From: Hayley Lindsey <hayley.lindsey@hotmail.com>
Sent: Tuesday, July 10, 2018 9:19 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Hayley Lindsey
535 Union Ave
Morgantown, WV 26505

Smith, Chris B

From: David Young <indaydream@gmail.com>
Sent: Tuesday, July 10, 2018 9:18 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

David Young
310 Fairfax Avenue Davis wv 26260
Hambleton, WV 26269

Smith, Chris B

From: David Lillard <david@lillards.com>
Sent: Tuesday, July 10, 2018 9:18 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments.

David Lillard
82 Sybil Court
Shepherdstown, WV 25443
304-876-9999

Smith, Chris B

From: Haid Haid <tanner.haid@gmail.com>
Sent: Tuesday, July 10, 2018 9:15 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Haid Haid
329 N Mildred Street
Charles Town, WV 25414
5403350687

Smith, Chris B

From: Tom epling <eplings@icloud.com>
Sent: Tuesday, July 10, 2018 9:14 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Tom epling
298 Shay Lane
Cass, WV 24927

Smith, Chris B

From: Jack Stansfield <jstansfield8981@gmail.com>
Sent: Tuesday, July 10, 2018 9:13 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jack Stansfield
16314 62nd Ave. NW
Stanwood, WA 98292
3606548205

Smith, Chris B

From: Doug Evans <douglas.evans@me.com>
Sent: Tuesday, July 10, 2018 9:12 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Doug Evans
214 10th Street
Parkersburg, WV 26101
130-471-0793

Smith, Chris B

From: Casey Kaemerer <casekaem@gmail.com>
Sent: Tuesday, July 10, 2018 9:12 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Casey Kaemerer
16 Birchlawn Dr
Lamoine, ME 04605
2076104521

Smith, Chris B

From: Melissa McCool <ranmel@televar.com>
Sent: Tuesday, July 10, 2018 9:01 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Melissa McCool
753 Hexon RD
Selah, WA 98942
5096977751

Smith, Chris B

From: Sara Anderson <saraliz.anderson@gmail.com>
Sent: Tuesday, July 10, 2018 8:53 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Sara Anderson
216 Park St.
Morgantown, WV 26501
2027686655

Smith, Chris B

From: David Kirkpatrick <davidlkirkpatrick@gmail.com>
Sent: Tuesday, July 10, 2018 6:24 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

David Kirkpatrick
306 Ross Street
Bridgeport, WV 26303
615-545-5778

Smith, Chris B

From: Kelly Campbell <kelly1.campbell329@frontier.com>
Sent: Tuesday, July 10, 2018 5:28 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Kelly Campbell
245 Boundary Avenue
Elkins, WV 26241

Smith, Chris B

From: Dede Cassis <dedecassis@gmail.com>
Sent: Tuesday, July 10, 2018 2:38 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Dede Cassis
3405 Kanawha Avenue SE
Charleston, WV 25304
3045524331

Smith, Chris B

From: Steven Grigsby <stevengrigsby@mac.com>
Sent: Tuesday, July 10, 2018 12:26 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Steven Grigsby
362 Cornelius Ave
Berkeley Springs, WV 25411
304 582-5678

Smith, Chris B

From: Melanie Climis <mpubst5@gmail.com>
Sent: Monday, July 09, 2018 11:46 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Melanie Climis
PO Box 1266
Shepherdstown, WV 25443

Smith, Chris B

From: Gabrielle Fry <gabriellefry@hotmail.com>
Sent: Monday, July 09, 2018 11:45 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Gabrielle Fry
164 Larkspur Ln
Martinsburg, WV 25403

Smith, Chris B

From: Karen Fields <kmeeks49@hotmail.com>
Sent: Monday, July 09, 2018 11:16 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Karen Fields
Meacham Dr.
Barboursville,, WV 25504
304-5221-9279

Smith, Chris B

From: Kali Harsh <Kharshrealtor@gmail.com>
Sent: Monday, July 09, 2018 9:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Kali Harsh
2393 Stony Run Rd
Independence, WV 26374
3043760403

Smith, Chris B

From: Katie Donnelly <Ballet1863@yahoo.com>
Sent: Monday, July 09, 2018 9:06 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Katie Donnelly
1279 Tyrone Rd
Morgantown, WV 26508

Smith, Chris B

From: Kari Harsh <Kariharsh@gmail.com>
Sent: Monday, July 09, 2018 8:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Kari Harsh
597 Shoemaker Cole Rd.
Eglen, WV 26716
3044411727

Smith, Chris B

From: Laura Dulaney <Padlz@frontier.com>
Sent: Monday, July 09, 2018 7:28 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Laura Dulaney
92 Armstrong Ave.
Bruceton Mills, WV 26525
304-692-3884

Smith, Chris B

From: Christine Stephens <Buddysmama25301@gmail.com>
Sent: Monday, July 09, 2018 6:58 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Christine Stephens
100 Washington St. E - Apt. 221
Charleston, WV 25301
(681) 205-2817

Smith, Chris B

From: Pam Faulkner <pamfaulkner58@gmail.com>
Sent: Monday, July 09, 2018 6:50 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Pam Faulkner
3408 Alcoa dr
Charleston, WV 25304
3044158084

Smith, Chris B

From: Betsy Rhodes <betsykr58@gmail.com>
Sent: Monday, July 09, 2018 6:19 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments.

Someone, somewhere, anyone needs to stop the politics and corporate greed of the matter and realize that once the water is poisoned, it's just poisoned. Done, over with. And no one can live without it. It's really quite simple.

Betsy Rhodes
11 Richland Dr
Hurricane, WV 25526

Smith, Chris B

From: Cynthia Ellis <cdellis@wildblue.net>
Sent: Monday, July 09, 2018 6:15 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

As a survivor of the 2014 water crisis, I thank you for this opportunity to provide comments,

Cynthia Ellis
3114 Steel Ridge Rd
Red House, WV 25168
304 586-4135

Smith, Chris B

From: Carole Williams <cwilli22@gmail.com>
Sent: Monday, July 09, 2018 6:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Carole Williams
2223 Heritage Pt
Morgantown, WV 26505
3045540199

Smith, Chris B

From: Christine Olson <avcomen1@gmail.com>
Sent: Monday, July 09, 2018 5:51 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Christine Olson
1646 Pitzers Chapel Rd
Martinsburg, WV 25403
3049951491

Smith, Chris B

From: Laurie Townsend <Laurietown@hotmail.com>
Sent: Monday, July 09, 2018 5:38 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Laurie Townsend
Wayside pl
Pocs, WV 25159
3045143538

Smith, Chris B

From: Janet Lenox <lenox.janet@gmail.com>
Sent: Monday, July 09, 2018 5:31 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. As the water trails are providing a wonderful opportunity for all, including myself to enjoy the beauty that wild and wonderful has to offer, not to mention the endless areas to swim, It is vital we keep our rivers to the highest standards possible. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank-you for your time,
Janet Lenox

Janet Lenox
1458 White Oak School Rd
Terra Alta, WV 26764
304-789-6248

Smith, Chris B

From: Diana Mazzella <dianapalmbeach@gmail.com>
Sent: Monday, July 09, 2018 5:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am concerned about ensuring that water quality standards appropriately address West Virginia needs. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Diana Mazzella
145 Eagle Dr
Maidsville, WV 26541
5613737870

Smith, Chris B

From: Travis Stimeling <stimeling.td@gmail.com>
Sent: Monday, July 09, 2018 5:15 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Travis Stimeling
142 Ridgeley Rd
Morgantown, WV 26505

Smith, Chris B

From: Jane Thomas <H.janethomas@icloud.com>
Sent: Monday, July 09, 2018 5:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Jane Thomas
813 Somerset Dr.
Charleston, WV 25302
304-989-2227

Smith, Chris B

From: Sara Carley-Peña <carleypeña@yahoo.com>
Sent: Monday, July 09, 2018 4:44 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Sara Carley-Peña
47 Fairmont Ave
Shepherdstown, WV 25443

Smith, Chris B

From: Michael Klausung <mike_klausung@hotmail.com>
Sent: Monday, July 09, 2018 4:41 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Michael Klausung
624 Cross Lanes Dr Apt 11
Nitro, WV 25143
25143

Smith, Chris B

From: Christine Linton <cblinton@gmail.com>
Sent: Monday, July 09, 2018 4:24 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Christine Linton
553 Harner run
Morgantown, WV 26508

Smith, Chris B

From: Anne Chopyak <annechopyak@yahoo.com>
Sent: Monday, July 09, 2018 4:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Anne Chopyak
89 Pocahontas St.
Buckhannon, WV 26201
304-439-5780

Smith, Chris B

From: John Doyle <rjohndoyle@comcast.net>
Sent: Monday, July 09, 2018 4:10 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

I support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would make us all safer.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a higher standard for discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the body of water contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments, John Doyle

John Doyle
254 Sandpiper Lane
Shepherdstown, WV 25443
304-876-1648

Smith, Chris B

From: Carol Nix <Almostnixie@cs.com>
Sent: Monday, July 09, 2018 3:29 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Carol Nix
624 Stony Run
Independence, WV 26374
304-864-6411

Smith, Chris B

From: Jeff Iliff <pfpjeff@gmail.com>
Sent: Monday, July 09, 2018 3:20 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

As an avid outdoorsman and member of two WV watersheds, I feel that I need to comment. Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Jeff Iliff
21 Riggs LN
Berkeley Springs, WV 26411
26411

Smith, Chris B

From: Mary L. <mar3336@citynet.net>
Sent: Monday, July 09, 2018 3:17 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Mary L.
Lee St.
Charleston, WV 25323

Smith, Chris B

From: jerry bowles <jerrybowles66@gmail.com>
Sent: Monday, July 09, 2018 2:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

jerry bowles
218 Chestnut Farm Ln
Lewisburg, WV 24901

Smith, Chris B

From: Sue E. Dean <deanks@juno.com>
Sent: Monday, July 09, 2018 2:32 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Sue E. Dean
236 Pratt Street
Longmont, CO 80501
3035551212

Smith, Chris B

From: J.T. Arbogast <jtarbogast@gmail.com>
Sent: Monday, July 09, 2018 1:26 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

J.T. Arbogast
214 Main Street
Cass, WV 24927
304-456-4588

Smith, Chris B

From: Kimberly Dilts <kdilts@gmail.com>
Sent: Monday, July 09, 2018 1:22 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Kimberly Dilts
214 MAIN ST
Cass, WV 24927
3044564588

Smith, Chris B

From: Marsha Wells <marshawells@hotmail.com>
Sent: Monday, July 09, 2018 1:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Marsha Wells
110 Twyford Ave
Sistersville, WV 26175
3046521233

Smith, Chris B

From: Nancy Ward <Naward57@gmail.com>
Sent: Monday, July 09, 2018 1:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Nancy Ward
703 Laurel Rd
Charleston, WV 25314
304-343-1617

Smith, Chris B

From: Ned Savage <nedsavage@gmail.com>
Sent: Monday, July 09, 2018 1:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Ned Savage
8094 Upper Craig Creek Rd.
Catawba, VA 24070
5405204154

Smith, Chris B

From: John Christensen <jbc4re@yahoo.com>
Sent: Monday, July 09, 2018 12:40 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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To summarize all this the EPA updated their recommended human health criteria limits for 94 chemical pollutants. In WVDEP's suggested revisions to Water Quality Standards, they choose to adopt the updated limits for just 56 pollutants. WV Rivers urges WVDEP to adopt all 94 updated pollutant limits for a number of reasons:

1. Protecting human health must depend on sound science. It is paramount for human health criteria to be based on the most up-to-date scientific methods and information. EPA's recommended limits reflect the best research we have available. WVDEP should adopt ALL of EPA's recommendations for protecting human health.
2. Every waterbody in West Virginia already has a fish consumption advisory. It's time to turn that around and make it safe again to eat fish from our rivers. Through neglecting to update human health criteria for all of EPA's recommended pollutants, the road to recovery for our rivers stands to be even longer and more difficult.

3. Neighboring states are adopting all 94 pollutant limits. Our neighbors in PA and KY have moved Page 242
ensure water safety by adopting all 94 of EPA's recommendations. West Virginians would be put at increased risk than
residents of nearby states for dangerous concentrations of the 38 pollutants not updated.

I'm commenting with WVDEP that WE ALL deserve safe water. I urge the WVDEP adopt all 94 of EPA's recommended
human health criteria limits to promote safe drinking water and recreational opportunities in WV.

Thank you for this opportunity to provide comments, John Christensen

John Christensen
512 Stoney Lick Rd.
martinsburg, WV 25403
304-754-8505

Smith, Chris B

From: Linda Reeves <openplainsart@gmail.com>
Sent: Monday, July 09, 2018 12:19 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Our rivers are our life. Every citizen in WV deserves to have clean pollutant free rivers that will not jeopardize the health and lives of any living creature. There should be no cutting back on the monitoring of our rivers. I would hope too that there would be more regulators hired to monitor the standards set by your agency to protect our waterways.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Linda Reeves
P.o. box 51
Aurora, WV 0

Smith, Chris B

From: Josh Posey <posey.josh@yahoo.com>
Sent: Monday, July 09, 2018 12:08 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Josh Posey
4401 Hemlock street
Parkersburg, WV 26104
3044809866

Smith, Chris B

From: Keith Lilly <lillyoutside@charter.net>
Sent: Monday, July 09, 2018 11:35 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am old enough to have witnessed rivers and streams become contaminated and toxic, but I've also seen waterways recover and become healthy again. Our state, country and global population places huge demands upon our fresh water. We must be ever vigilant in protecting this resource. WV is the birthplace of many rivers - the Elk River being particularly important to me - so we should not allow our standards to be lessened with so many threats to our public water safety.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Keith Lilly
300 McGraw Ave.
Webster Springs, WV 26288
931-319-7856

Smith, Chris B

From: DK Anestos <mdi1755@yahoo.com>
Sent: Monday, July 09, 2018 10:41 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Use the available scientific information and please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

DK Anestos
Nitro
Nitro, WV, WV 25143
3047556789

Smith, Chris B

From: Elaine Wine <braxtonconcernedamericans@gmail.com>
Sent: Monday, July 09, 2018 9:14 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Elaine Wine
Middle Ridge Road
Sutton, WV 26601
304-644-5257

Smith, Chris B

From: Giulia Mannarino <manna397@yahoo.com>
Sent: Monday, July 09, 2018 7:08 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Giulia Mannarino
2292 Middle Fork Lee Creek RD
Belleville, WV 26133
304 863-8484

Smith, Chris B

From: Kimberly Wiley <kwiley16@hotmail.com>
Sent: Monday, July 09, 2018 1:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Kimberly Wiley
72 Chimney Hill Rd
Rochester, NY 14612

Smith, Chris B

From: joe stanley <jmustang69mach1@aol.com>
Sent: Sunday, July 08, 2018 10:55 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

joe stanley
37 stanley dr.
prichard, WV, WV 25555

From: Elizabeth Watts White <elizabeth.watts@verizon.net>
Sent: Sunday, July 08, 2018 10:42 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Elizabeth Watts White
16 Starks Place
Lynbrook, NY 11563
5165555555

Smith, Chris B

From: K Scott <lil_lily@icloud.com>
Sent: Sunday, July 08, 2018 9:35 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

K Scott
Arlington Ave.
Charleston, WV 25302

Smith, Chris B

From: Miriam Miller <rmillmim@aol.com>
Sent: Sunday, July 08, 2018 8:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Miriam Miller
82 Pine Tree Lane
Morgantown, WV 26508
304-594-2378

Smith, Chris B

From: Jose De arteaga <kenn.jose@comcast.net>
Sent: Sunday, July 08, 2018 8:01 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Jose De arteaga
2014 31st Place, SE
Washington, DC 20020
2027898087

Smith, Chris B

From: Diana Bohn <nicca@igc.org>
Sent: Sunday, July 08, 2018 3:58 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Diana Bohn
618 San Luis
Berkeley, CA 94707
5105255497

Smith, Chris B

From: Frances Marshall <tigerhawk_silver@hotmail.com>
Sent: Sunday, July 08, 2018 2:27 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Frances Marshall
553 S Church St Apt 13
Shepherdstown, WV 25443
3048766337

Smith, Chris B

From: Laurie Methven <ljmethven@aol.com>
Sent: Sunday, July 08, 2018 2:19 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Laurie Methven
317 Equestrian Ln
Hedgesville, WV 25427
3042587258

Smith, Chris B

From: Michele Baranaskas <micheleb@randallj.com>
Sent: Sunday, July 08, 2018 11:26 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria, as our neighboring states of Kentucky and Pennsylvania have done. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Michele Baranaskas
1833 Spring Drive, South Charleston WV 25303-2220 South Charleston, WV 25303

Smith, Chris B

From: Martha Walker <Marthalee3@hotmail.com>
Sent: Sunday, July 08, 2018 10:14 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments,

Martha Walker
202 Joseph Street
South Charleston, WV 25303
3047446398

Smith, Chris B

From: Larry Thomas <larrythomas@aol.com>
Sent: Sunday, July 08, 2018 9:57 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments,

Larry Thomas
P.O. Box 194
Circleville, WV 26804
3045672602

Smith, Chris B

From: David Long <dslong@mac.com>
Sent: Sunday, July 08, 2018 7:40 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments,

David Long
2145 Poe Run Rd
Elkins, WV 26241
415-309-7655

Smith, Chris B

From: Jane Morningstar <Morningstarjane@yahoo.com>
Sent: Sunday, July 08, 2018 7:04 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jane Morningstar
184 Wolfenbarger Road
Renick, WV 24966
304-646-1086

Smith, Chris B

From: Penny Manion <Pennyrmanion@yahoo.com>
Sent: Sunday, July 08, 2018 6:46 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Penny Manion
PO Box 1307
Shepherdstown, WV 25443
3049041983

Smith, Chris B

From: Margaret Meeker <cmm74@suddenlink.net>
Sent: Sunday, July 08, 2018 6:33 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflects the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, a language on the sign should include the notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Margaret Meeker
4-115 The Fields
Williamstown, WV 26187
3048504397

Smith, Chris B

From: tom harris <mchazy77@hotmail.com>
Sent: Saturday, July 07, 2018 10:14 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

tom harris
17 gate ct
burlington, NJ 8016
6097443953

Smith, Chris B

From: Rhonda Marrone <rmm164@yahoo.com>
Sent: Saturday, July 07, 2018 9:47 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Rhonda Marrone
939 Somerset Dr.
Charleston, WV 25302
3044152775

Smith, Chris B

From: John Geelhaar <oldseaman@frontier.com>
Sent: Saturday, July 07, 2018 9:06 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

John Geelhaar
2430 Little Buck Run
New Milton, WV 26411
(304)873-2548

Smith, Chris B

From: Diana Greenhalgh <diana12759@gmail.com>
Sent: Saturday, July 07, 2018 8:04 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Diana Greenhalgh
2051 Red Lick Rd
New Milton, WV 26411
304-873-1376

Smith, Chris B

From: Bill Franz <frnzbill@aol.com>
Sent: Saturday, July 07, 2018 6:42 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Bill Franz
600 Pennsylvania Ave Unit 1
Nutter Fort, WV 26301
304-623-6091

Smith, Chris B

From: Peter Schumacher <pschu9@gmail.com>
Sent: Saturday, July 07, 2018 6:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Peter Schumacher
2335 Burton Run Rd
Pennsboro, WV 26415
3043772329

Smith, Chris B

From: Therese DeBing <buddhabear88@hotmail.com>
Sent: Saturday, July 07, 2018 6:18 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Therese DeBing
935 Lighthouse Ave #14
Pacific Grove, CA 93950, CA 93950
8319201581

Smith, Chris B

From: sarita dotson <saritad@suddenlink.net>
Sent: Saturday, July 07, 2018 5:54 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

sarita dotson
106 briarwood pl
parkersburg, WV 26104

Smith, Chris B

From: Martha Spencer <spencer_martha@hotmail.com>
Sent: Saturday, July 07, 2018 4:38 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Martha Spencer
988 Henry Mountain Rd
Brevard, NC 28712
8288852680

Smith, Chris B

From: Edward Thornton <ert@sas.upenn.edu>
Sent: Saturday, July 07, 2018 4:32 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Edward Thornton
7 Swarthmore Place
Swarthmore, PA 19081
1111111111

Smith, Chris B

From: Regina Hendrix <regina.hendrix@comcast.net>
Sent: Saturday, July 07, 2018 4:04 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

West Virginians cannot afford any more water pollution. People are leaving So. WV because of fouled water and air. Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Regina Hendrix
65 Bradford Court
Charles Town, WV, WV 25414
3047250223

Smith, Chris B

From: George Little <george.wilbur.little@gmail.com>
Sent: Saturday, July 07, 2018 3:49 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

George Little
307 Hillside Pass
Frankford, WV 24938
3046454705

Smith, Chris B

From: Lynn Yellott <lynnyellott@frontiernet.net>
Sent: Saturday, July 07, 2018 2:51 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am writing to urge you to maintain Water Quality Standards in order to protect WV water. I ask you to adopt the following recommendations so that public health and recreational safety will be safeguarded.

Human Health Criteria:

It's essential to incorporate EPA's updated National Recommended Water Quality Criteria for human health. This represents the most recent scientific data. I'm concerned that while 94 pollutants were updated by EPA, WVDEP is proposing to adopt new criteria for only 56. It's imperative to adopt all 94 recommended criteria. By doing that, WVDEP will protect us West Virginians in the case that any of those 94 chemicals are discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Public health will be endangered if the critical design flow of human health criteria is changed to the harmonic mean. Human health will be at risk from toxins that have short-term exposure risks. It is essential to include language giving discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

It is also imperative to add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, it is important to specify signage requirements for overlapping mixing zones. For the protection of public health, signs should include information that the body of water contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signs should also include graphics communicating that the water is toxic so that those who cannot read or cannot read English understand.

Thank you in advance for making sure we can count on our water in WV for drinking and for recreation.

Lynn Yellott
PO Box 1677
Shepherdstown, WV 25443

Smith, Chris B

From: Sarah Hinnant <sarahhinnant@gmail.com>
Sent: Saturday, July 07, 2018 2:24 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Sarah Hinnant
317 Pat Cale road
Masontown, Wv 2654
3048644009

Smith, Chris B

From: Karen Yarnell <karen.grubb@fairmontstate.edu>
Sent: Saturday, July 07, 2018 2:08 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Karen Yarnell
21, Beverly Circle
Fairmont, WV 26554

Smith, Chris B

From: Rachael Pappano <shamrock.magic@yahoo.com>
Sent: Saturday, July 07, 2018 1:29 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Rachael Pappano
330 River Rd.
Mattawamkeag, ME 04459
(

Smith, Chris B

From: Jane Seward <Jamunadasi@gmail.com>
Sent: Saturday, July 07, 2018 1:26 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Jane Seward
2587 McCrearys Ridge Rd
Moundsville, WV 26041
304-845-3875

Smith, Chris B

From: Steve Malafy <smalafy@gmail.com>
Sent: Saturday, July 07, 2018 12:32 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Steve Malafy
280 Centerville Harp Rd
French Creek, WV 26218
3044601511

Smith, Chris B

From: doug krause <dougkrause@mts.net>
Sent: Saturday, July 07, 2018 12:31 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

doug krause
3501 Maccorkle Ave SE
charleston, WV 25304
5555555555

Smith, Chris B

From: Eric Engle <ericdengle85@gmail.com>
Sent: Saturday, July 07, 2018 10:52 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure:

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Eric Engle
324 Point Drive
Parkersburg, WV 26101
(304) 488-4384

Smith, Chris B

From: Barbara Grigg <rbgrigg@comcast.net>
Sent: Saturday, July 07, 2018 10:39 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

SINCE neighboring states are adopting all 94 pollutant limits. Our neighbors in PA and KY have moved to proactively ensure water safety by adopting all 94 of EPA's recommendations. West Virginians would be put at increased risk FOR LAWSUITS from nearby states for dangerous concentrations of the 38 pollutants not updated.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Barbara Grigg
1900 Bunner Ridge
Fairmont, WV 26554

Smith, Chris B

From: karen kish <idiaaemula@gmail.com>
Sent: Saturday, July 07, 2018 10:29 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

karen kish
2001 light house road
given, WV 25245
3043724086

Smith, Chris B

From: Carol Workman <akmagpie96@yahoo.com>
Sent: Saturday, July 07, 2018 10:24 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Carol Workman
P.O. Box 5065
Beckley, WV 25801
304-207-8820

Smith, Chris B

From: Elaine Komarow <elaine@siriusacupuncture.com>
Sent: Saturday, July 07, 2018 10:22 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Please protect our water!

Please adopt all 94 EPA recommended criteria.

Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Elaine Komarow
201 Warden Lake Hollow
Wardensville, WV 26851
(703) 560-1964

Smith, Chris B

From: MaryEllen Seehafer <333mellan@gmail.com>
Sent: Saturday, July 07, 2018 10:04 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

MaryEllen Seehafer
500 Oak Forest Ln
Berkeley Springs, WV 0
5713310676

Smith, Chris B

From: Jerry Carson <jcarson1@suddenlink.net>
Sent: Saturday, July 07, 2018 9:50 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Jerry Carson
5215 beechcrest dr
cross lanes, WV 25313
3047761422

Smith, Chris B

From: Ellen Sparks <elsparkie2@gmail.com>
Sent: Saturday, July 07, 2018 9:43 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

As a native West Virginian, I have loved this state for 62 years -- sometimes in spite of the pollution from mining & industry. The mine drainage is being cleaned up as much as humanly possible. Our rivers & streams are precious to those of us who live here & extremely important for continue to encourage tourism in this state. Thank you!!

Ellen Sparks
1380 WoolenMill Road
Albright, WV 26519
304 698 1496

Smith, Chris B

From: Copley Smoak <omnirodman@gmail.com>
Sent: Saturday, July 07, 2018 8:50 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Copley Smoak
4712 Tahiti Drive
Bonita Springs, FL 34134

Smith, Chris B

From: Paula Mann <oliverphoto1@aol.com>
Sent: Saturday, July 07, 2018 8:44 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

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Thank you for this opportunity to provide comments,

Paula Mann
3413 Ellison Ridge
Greenville, WV 24945

Smith, Chris B

From: Lawrence Orr <edhorse@suddenlink.net>
Sent: Saturday, July 07, 2018 8:34 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Lawrence Orr
104 Hillcrest Ave
Elkview, WV 25071
3049657185

Smith, Chris B

From: Judy Hamilton <annasmomjudy@yahoo.com>
Sent: Saturday, July 07, 2018 7:21 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Judy Hamilton
907 Mathews Ave
Charleston, WV 25302
3043469210

Smith, Chris B

From: Merri Morgan <mmorgan@blazingaccess.com>
Sent: Saturday, July 07, 2018 5:34 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

I urge you to remember that without water we would all be dead within days; polluted water will just take a little longer. We must have clean, potable water. Thank you for this opportunity to provide comments.

Merri Morgan
3719 Laurel Creek Road
Greenville,, WV 24945
3048326008

Smith, Chris B

From: Peter Schumacher <pschu9@gmail.com>
Sent: Friday, July 06, 2018 10:46 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Peter Schumacher
 2335 Burton Run Rd
 Pennsboro, WV 26415
 3043772329

Smith, Chris B

From: Sarah Bonnett <lightbeguiding@yahoo.com>
Sent: Friday, July 06, 2018 10:22 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Sarah Bonnett
 515 Bonnett Rd
 Cox's Mills, WV 0

Smith, Chris B

From: John Pasqua <killself5150@yahoo.com>
Sent: Friday, July 06, 2018 10:18 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

John Pasqua
843 S ESCONDIDO BLVD
Valley Center, CA 92025
7604843741

Smith, Chris B

From: Robert A. Mertz <no1ramertz@gmail.com>
Sent: Friday, July 06, 2018 9:16 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am a retired science teacher. I spent thirty one years teaching Biology, Environmental Earth Science and Wildlife Management classes in the public school systems of three states. My education was first as a Biologist, teaching came later. I have a Master of Science degree in Biology. As a biologist I am concerned with the effects our large human population is having on the sustainability of our Earth's life support systems. Although there are some impressive natural systems that help to stabilize the living environment on our planet, there are limits to how much abuse these systems can withstand. The fossil records show that in the past there have been several major disruptions of these systems. Today the biggest threat to our space ship Earth comes from the activities of us humans. Our continued population growth combined with the crazy notion that there must always be an expanding economy is a sure-fired prescription for disaster. Misguided economic policies are in direct conflict with the natural limits of Earth. Our finite planet can not provide unlimited resources to allow us to continue on the path we are on.

We must make decisions based on sound ecological principles if we are to bequeath our children and grandchildren with a place to live that is both sustainable and interesting. It will be a tragedy of monstrous proportions if our shortsighted way of making decisions degrades the world that our children inherit. The wonderful diversity of living creatures and wild unspoiled natural places must be preserved for them. It seems that we are unaware that the wild natural places are the ultimate infrastructure of the planet. The natural ecosystems stabilize the atmospheric gasses and maintain our freshwater systems. Our present economic systems of continued growth are nothing more than a Ponzi scheme in which our decedents will be left with nothing of value.

I am writing today to request that you help address one of the issues that will affect future generations, including our two sons and our wonderful eight year old granddaughter and her little sister, born in October. Our other son and wife a new baby son. Please try to throw off the short term considerations and take action that will address the long term welfare of humankind. The welfare of all of our children are depending on us.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

I support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments, Please keep the long-term welfare of children such as my three grandchildren in mind.

Robert A. Mertz
1205 Mulberry Rdg
Spencer, WV 25276
(304) 927-5055

Smith, Chris B

From: Melissa Armstrong <rotnchow@gmail.com>
Sent: Friday, July 06, 2018 9:14 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Melissa Armstrong
1399 Pigeon Roost Rd
Kenna, WV 25248
3045391800

Smith, Chris B

From: garvey garvey <wolffhowlmama@yahoo.com>
Sent: Friday, July 06, 2018 7:23 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

garvey garvey
429 s 24th
clinton, OK 73601
5803232327

Smith, Chris B

From: Mark Leonard <mleonard8181@gmail.com>
Sent: Friday, July 06, 2018 7:03 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Mark Leonard
19499 Coshocton Rd.
Mount Vernon, OH 43050
740-397-6725

Smith, Chris B

From: Lenore Reeves <lerves@gmail.com>
Sent: Friday, July 06, 2018 6:53 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Lenore Reeves
19934 Hickory Stick Ln
Mokena, IL 60448
7087557010

Smith, Chris B

From: David Brisell <brisell@frontiernet.net>
Sent: Friday, July 06, 2018 6:49 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

David Brisell
3491 Clifton Mills Road
Bruceton Mills, WV 26525
(304) 379-3503

Smith, Chris B

From: Catherine Grant <catfitz1990@gmail.com>
Sent: Friday, July 06, 2018 6:37 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Thanks for the opportunity to make comments for the Triennial Review. Please adapt all 94 of the EPA recommended pollutant limits especially because of their importance to the health of our citizens.

How amazing it would be as a West Virginian to brag that my state uses the best available scientific consensus in making decisions for protection of water quality to protect the health of ALL its citizens.

I even dare to hope that someday in the future our past mistakes, made with the thinking that economic progress required poisoning ourselves and despoiling the gifts of nature, will be reversed by implementing and enforcing sound environmental protection laws.

Sincerely,

Catherine Grant
2001 Wv Highway 5 E
Glenville, WV 26351
3042665210

Smith, Chris B

From: Steven Runfola <stevenrunfola@gmail.com>
Sent: Friday, July 06, 2018 6:14 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Thank you for this opportunity to provide comments,

Steven Runfola
45 Park Ridge Drive
Morgantown, WV 26508
3046801340

Smith, Chris B

From: Phyllis Chavez <phyllis@phyllischavez.com>
Sent: Friday, July 06, 2018 6:13 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Phyllis Chavez
2112 Ocean Park Blvd
Santa Monica, CA 90405
3103968108

Smith, Chris B

From: Michael Ross <ross1458@gmail.com>
Sent: Friday, July 06, 2018 5:59 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Michael Ross
2208 Donald Ave
Huntington, WV 25701
3046385489

Smith, Chris B

From: James Mulcare <xsecretsx@cableone.net>
Sent: Friday, July 06, 2018 5:49 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

James Mulcare
 1110 Benjamin St
 Clarkston, WA 99403
 (509) 758-3934

Smith, Chris B

From: Kathy McMurray <kmcmurray@suddenlink.net>
Sent: Friday, July 06, 2018 5:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Please protect the water quality for West Virginians!

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Kathy McMurray
2175 Larry Anderson Road
Rock Cave, WV 26234
304-613-9966

Smith, Chris B

From: AnnaMary Walsh <gawalsh@frontiernet.net>
Sent: Friday, July 06, 2018 5:06 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

AnnaMary Walsh
254 Chandler Dr
Shepherdstown, WV 25443
3048766828

Smith, Chris B

From: Barbara Frierson <b03b13f@gmail.com>
Sent: Friday, July 06, 2018 4:50 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Barbara Frierson
811 Dinden Drive
Saint Albans, WV 25177

Smith, Chris B

From: Joseph Spurgas <jspurgas@gmail.com>
Sent: Friday, July 06, 2018 4:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Joseph Spurgas
49 Shepherd Lane
shepherdstown, WV 25443

Smith, Chris B

From: Tia Triplett <tia@anlf.com>
Sent: Friday, July 06, 2018 4:33 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Tia Triplett
3959 Berryman Avenue
Los Angeles, CA 90066
3105520035

Smith, Chris B

From: Tonya Stiffler <tstiffler@comcast.net>
Sent: Friday, July 06, 2018 4:17 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Tonya Stiffler
18051 Sunnyside Avenue North
Shoreline, WA 98133
2066019688

Smith, Chris B

From: Angela Hughes <scampyhughes@aol.com>
Sent: Friday, July 06, 2018 3:58 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Angela Hughes
2101 Rays Branch Rd
Charleston, WV 25314
3034370381

Smith, Chris B

From: Joey Aloï <joeyaloi@gmail.com>
Sent: Friday, July 06, 2018 3:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Joey Aloï
1587 Virginia Street East, Apt. C
Charleston, WV 25311

Smith, Chris B

From: sandra levesque <slevesque3@yahoo.com>
Sent: Friday, July 06, 2018 3:16 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments, sandra levesque

sandra levesque
144 conscription way
hedgesville, WV 25247

Smith, Chris B

From: Colleen Anderson <motherwit@suddenlink.net>
Sent: Friday, July 06, 2018 3:15 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Colleen Anderson
6 Arlington Court
Charleston, WV 25301
304-342-1213

Smith, Chris B

From: Rebecca Berlant <rsberlant@aol.com>
Sent: Friday, July 06, 2018 3:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Rebecca Berlant
8A First Place
Brooklyn, NY 11231
7185551212

Smith, Chris B

From: Nicole Jones <ncasebolt23@gmail.com>
Sent: Friday, July 06, 2018 2:50 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Nicole Jones
RR 1 Box 192D
Poca, WV 25159
304-395-9378

Smith, Chris B

From: Brenda Wilson <brendaterminiwilson@gmail.com>
Sent: Friday, July 06, 2018 2:42 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. As a person who was living in Charleston during the terrible chemical release a few years ago, this issue is a personal one. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Brenda Wilson
1065 Steele Hollow Rd
Spencer, WV 25276
3049275833

Smith, Chris B

From: Harshbarger Harshbarger <harshbargerd@wvumedicine.org>
Sent: Friday, July 06, 2018 2:38 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Not only are we the Mountain State, we are also the Head Water State and are the primary source of water for much of the eastern part of the US. With that we have a responsibility for the citizens of WV and all those who are served by our head water source.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Harshbarger Harshbarger
1009 Vandalia Rd
Morgantown, WV 26501
3042903700

Smith, Chris B

From: Brian O'Donnell <odonnell@wju.edu>
Sent: Friday, July 06, 2018 2:34 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Brian O'Donnell
316 Washington Ave
Wheeling, WV 26003
3043800155

Smith, Chris B

From: Barbara Brown <bjbrnwv@gmail.com>
Sent: Friday, July 06, 2018 2:34 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Barbara Brown
95 Hartford Street
Morgantown, WV 26501
3042883318

Smith, Chris B

From: Mark Korman <b1batty1@yahoo.com>
Sent: Friday, July 06, 2018 2:24 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Mark Korman
Alderson, WV

Mark Korman
2917 Highland Trail
Alderson, WV 24910
304-445-7309

Smith, Chris B

From: Pamela Ruediger <pruediger@yahoo.com>
Sent: Friday, July 06, 2018 2:23 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am vehemently opposed to ANYTHING that would lead to degradation of West Virginia's streams, springs and/or rivers!!!! Water Quality Standards are SUPPOSED to protect and maintain water quality for safe use and enjoyment!!! The following recommendations MUST be enacted to ensure public health and recreational safety is ensured for all West Virginians!!!!

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information!! While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. The ONLY right thing to do to protect WV citizens & waters is adopt ALL 94 recommended criteria!!!! Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia!

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks!!! Language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure MUST BE INCLUDED!!!

Overlapping Mixing Zones:

Language MUST BE ADDED to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone!!!

Also, specify signage requirements for overlapping mixing zones!!! To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts!!! The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English!

Thank you for this opportunity to provide comments,

Pamela Ruediger
64 Weeping Willow Run
Parsons, WV 26286
304-532-3580

Smith, Chris B

From: Tamara McCready <stevenmccready@roadrunner.com>
Sent: Friday, July 06, 2018 2:20 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Tamara McCready
6278 Cynthia st
Simi Valley, CA 93063
8057919064

Smith, Chris B

From: Bret Rosenblum <bretrosenblum@hotmail.com>
Sent: Friday, July 06, 2018 2:18 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Bret Rosenblum
 11303 Lower Cheat Rd
 Elkins, WV 0
 14127599303

Smith, Chris B

From: Timothy Simmons <etim@mail.com>
Sent: Friday, July 06, 2018 2:14 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Timothy Simmons
quarrier st
charleston, WV 25301

Smith, Chris B

From: Tom Nagle <tom@tnagle.com>
Sent: Friday, July 06, 2018 2:12 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

I am a WV resident, living on the Cacapon River in Morgan County, and a voter in WV. I strongly believe that Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Tom Nagle
362 Fishers Bridge Lane, Great Cacapon, WV 25422 Great Cacapon, WV 25422
304-947-5408

Smith, Chris B

From: Susan VanMeter <wolfdmoon@citlink.net>
Sent: Friday, July 06, 2018 1:51 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Susan VanMeter
28 Critton Owl Hollow Rd
Paw Paw, WV 25434
3040000000

Smith, Chris B

From: Tracy Asbury <tracyasbury99@gmail.com>
Sent: Friday, July 06, 2018 1:36 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Tracy Asbury
PO Box 535
White Sulphur Springs, WV 24986
888-752-9982

Smith, Chris B

From: Tom Hoffman <gopullman@aol.com>
Sent: Friday, July 06, 2018 1:35 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Tom Hoffman
135 Davis Lane
Pearisburg, VA 24134
5409211184

Smith, Chris B

From: Wiley McIntyre <macmpsvc@gmail.com>
Sent: Friday, July 06, 2018 1:34 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

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Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Wiley McIntyre
197 Spur Road
Martinsburg, WV 25404
3042670000

Smith, Chris B

From: Dianne Douglas <ddouglas@mainex1.asu.edu>
Sent: Friday, July 06, 2018 1:27 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Dianne Douglas
2723 E Valencia Dr
Phoenix, AZ 85042
6022687065

Smith, Chris B

From: Charles Walbridge <ccwalbridge@cs.com>
Sent: Friday, July 06, 2018 1:27 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Our Water Quality Standards protect and preserve water quality for safe use and enjoyment. Please consider the following recommendations to protect the public health of all West Virginians.

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. We need to adopt all 94 recommended criteria.

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more stringent method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants prior to approval of any overlapping mixing zone. Please specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the water contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Sincerely,

Charles Walbridge
1886 Little Sandy Road
Bruceton Mills, wv 26525
304-379-9002

Smith, Chris B

From: Robin Wright <robindykens@aol.com>
Sent: Friday, July 06, 2018 1:17 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

Robin Wright
2595 Stringtown Road
Sinks Grove, WV 24976
304-772-5981

Smith, Chris B

From: Taralyn D'Eramo <tderamo100@gmail.com>
Sent: Friday, July 06, 2018 1:15 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments, Taralyn D'Eramo

Taralyn D'Eramo
5507 Greenmont Terrace
Vienna, WV 26105
304-834-3190

Smith, Chris B

From: Jody Ross <jody0660@gmail.com>
Sent: Friday, July 06, 2018 1:12 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

Overlapping Mixing Zones:

Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments.

Jody Ross
2208 Donald Ave
Huntington, WV 25701
3046385439

Smith, Chris B

From: Jane Butler <Butlertwins97@aol.com>
Sent: Friday, July 06, 2018 1:10 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments.

Jane Butler
314wildrose dr
Hedgesville, WV 25427
3042585594

Smith, Chris B

From: James Shreves <evashreves@yahoo.com>
Sent: Friday, July 06, 2018 1:03 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

James Shreves
3770 Oxford Rd.
Pullman, WV 26421

Smith, Chris B

From: Thomas Johnson <tjohnson24962@yahoo.com>
Sent: Friday, July 06, 2018 1:03 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Thomas Johnson
191 Valley View Farm Road
Pence Speings, WV 24962

Smith, Chris B

From: Teresa Parcell <tlparcell@suddenlink.net>
Sent: Thursday, July 05, 2018 5:21 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Teresa Parcell
6024 Little Sandy Road
Elkview, WV 25071

Smith, Chris B

From: Karen Scalf <Scalfsong@gmail.com>
Sent: Thursday, July 05, 2018 8:52 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Karen Scalf
517 10th Ave.
Huntington, WV 25701
304-654-1819

Smith, Chris B

From: Judith Clister <webname@frontiernet.net>
Sent: Thursday, July 05, 2018 6:45 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Judith Clister
640 Bolyard Road
Bruceton Mills, WV 26525
304-379-3564

Smith, Chris B

From: Bert Lustig <buybook@earthlink.net>
Sent: Tuesday, July 03, 2018 12:48 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Bert Lustig
3476 Mauzy Rd
Berkeley Springs, WV 25411
3042581195

Smith, Chris B

From: Carolyn Thomas <webethomas@aol.com>
Sent: Monday, July 02, 2018 3:26 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Carolyn Thomas
4894 Scrabble Road
Shepherdstown, WV 25443
3042673115

Smith, Chris B

From: Debbie Naeter <debbienaeter50@gmail.com>
Sent: Monday, July 02, 2018 2:02 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Debbie Naeter
375 Hillside Pass
Frankford, WV 24938
5734501401

Smith, Chris B

From: Johanna Flythe <hermansonj@aol.com>
Sent: Sunday, July 01, 2018 5:54 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Johanna Flythe
9220 Hastings Drive
Manassas, VA 20110

Smith, Chris B

From: Susan Hamann <ingohamann@me.com>
Sent: Saturday, June 30, 2018 4:20 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Susan Hamann
1 Ming Court
Chester, NJ 7930
7324812472

From: Aaron Llewellyn <mowe1420@aol.com>
Sent: Friday, June 29, 2018 2:46 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,
If you poison the people, you poison history, culture and society.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Aaron Llewellyn
1327 7th Ave
Huntington, WV 25701

Smith, Chris B

From: Lleona Chew <Mamalleona@yahoo.com>
Sent: Friday, June 29, 2018 11:46 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Lleona Chew
62 Garden Place
Charles Town, WV 25414

Smith, Chris B

From: Amber Griffith <CharlotteMichael1401@yahoo.com>
Sent: Friday, June 29, 2018 7:25 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Amber Griffith
59.merlin dr
Inwood, WV 25428

Smith, Chris B

From: Debra Hamilton <dlhwva@aol.com>
Sent: Thursday, June 28, 2018 11:19 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

"Harmonic mean" sounds so, well, harmonious - but some of these recommendations will have mean results. I am especially in support of the signage in the overlapping mixing zones - and really any where the water is contaminated, given the many folks who eat the fish fro WV's waters.

Water Quality Standards protect and maintain water quality for safe use and enjoyment. I also hope the WVDEP in this Triennial Review adopts all 94 criteria recommended by the EPA that reflect the latest scientific information.

Thank you for this opportunity to provide comments,

Debra Hamilton
604 Virginia Street East
Charleston, WV 25301
3943420133

Smith, Chris B

From: Barbara Klinger <conradsnug@hotmail.com>
Sent: Thursday, June 28, 2018 10:02 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

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Thank you for this opportunity to provide comments,

Barbara Klinger
4943 Mayfield Rd
Lyndhurst, OH 44124
2163810422

Smith, Chris B

From: Terry Webb <tlwebb01@icloud.com>
Sent: Thursday, June 28, 2018 10:00 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Terry Webb
South Main Street
Webster Springs, WV 26288

Smith, Chris B

From: Gallaher Gallaher <iamstrega@aol.com>
Sent: Thursday, June 28, 2018 9:57 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Thank you for this opportunity to provide comments,

Gallaher Gallaher
157 Gallaher Street
Huntington, WV 25705
3047107956

Smith, Chris B

From: DEBORAH SMITH <deborah993@cox.net>
Sent: Thursday, June 28, 2018 6:24 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Please add language to the rule that requires evaluation of potential human health impacts caused by cumulative effects and interactions between different pollutants, as recommended by EPA, prior to approval of any overlapping mixing zone.

Also, specify signage requirements for overlapping mixing zones. To protect public health, language on the sign should include notice that the waterbody contains high levels of pollutants harmful to human health and that contact with the water or consumption of fish harvested in the area could have severe negative health impacts. The signage should also include a graphic depicting the toxicity of the water for individuals that cannot read English.

Thank you for this opportunity to provide comments,

DEBORAH SMITH
3044 NW 30th St
Oklahoma City, OK 73112
4059426953

Smith, Chris B

From: Jarrett Cloud <jadacloud9@gmail.com>
Sent: Thursday, June 28, 2018 4:29 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

We support WVDEP taking into consideration EPA's updated National Recommended Water Quality Criteria for human health that reflect the latest scientific information. While 94 pollutants were updated by EPA, WVDEP is choosing to only adopt new criteria for 56. Please adopt all 94 recommended criteria. Doing so would proactively equip WVDEP with protective pollution limits should any of the 94 chemicals be discharged in West Virginia.

Critical Design Flow for Human Health Criteria:

Changing the critical design flow of human health criteria to the harmonic mean does not adequately protect human health from toxins that have short-term exposure risks. Please include language that gives discretion for the Secretary to apply a more protective method for calculating discharge limits for pollutants that are known to harm human health through short-term exposure.

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Thank you for this opportunity to provide comments,

Jarrett Cloud
260 Tabor Road, Apt. 409
Morris Plains, NJ 07950

Smith, Chris B

From: Felice Cohen <nahcotta2@aol.com>
Sent: Thursday, June 28, 2018 2:15 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Felice Cohen
1933 47th St NW
Nahcotta, WA 98637

Smith, Chris B

From: Linda Jones <Jerichorose3@yahoo.com>
Sent: Thursday, June 28, 2018 1:49 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Linda Jones
1004 Tanner Hill Road
Tanner, WV 26137
3044628549

Smith, Chris B

From: Stacey Wolfe <narpet7@aol.com>
Sent: Thursday, June 28, 2018 1:32 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Stacey Wolfe
8225 Bodkin Ave
Lake Shore, MD 21122

Smith, Chris B

From: Ellis Woodward <yoellis@earthlink.net>
Sent: Thursday, June 28, 2018 12:29 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

Human Health Criteria:

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Ellis Woodward
3422 Seneca St
Baltimore, MD 21211
4102434174

Smith, Chris B

From: Javier Rivera <javierocker@aol.com>
Sent: Thursday, June 28, 2018 12:09 PM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Javier Rivera
55 S 3rd St
Brooklyn, NY 11249
9172827299

Smith, Chris B

From: Pat DeFrancis <patima65@comcast.net>
Sent: Thursday, June 28, 2018 11:46 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Critical Design Flow for Human Health Criteria:

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Thank you for this opportunity to provide comments,

Pat DeFrancis
144 Miller St.
Wheeling, WV 26003
(304)281-5936

Smith, Chris B

From: Christopher Fetta <bassyllama@gmail.com>
Sent: Thursday, June 28, 2018 11:44 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Christopher Fetta
60 Smith St
Hicksville, NY 11801
6316723980

Smith, Chris B

From: Bill Funk <williamfunk3@icloud.com>
Sent: Thursday, June 28, 2018 11:42 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Bill Funk
514 Marquis Street
Staunton, VA 24401
5402928581

Smith, Chris B

From: Susan Hathaway <susanhathaway@earthlink.net>
Sent: Thursday, June 28, 2018 11:01 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Susan Hathaway
5107 Passons Boulevard #313
Pico Rivera, CA 90660

From: Bruce Musser <spruceh2o@yahoo.com>
Sent: Thursday, June 28, 2018 10:27 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Bruce Musser
103 Roy Ray Rd
Renick, WV 24966
5406914546

Smith, Chris B

From: Paul Kahne <wacko4950@yahoo.com>
Sent: Thursday, June 28, 2018 10:09 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Paul Kahne
59 Dogwood Ridge Lane
Wiley Ford, WV 26767
2407241578

Smith, Chris B

From: Susan Julian <suejulian@suddenlink.net>
Sent: Thursday, June 28, 2018 9:50 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Susan Julian
PO Box 677
Pinch, WV 25156
(304) 965-9644

Smith, Chris B

From: Frank Beller <joycebeller@msn.com>
Sent: Thursday, June 28, 2018 9:44 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Frank Beller
PO Box 621
Eleanor, WV 25070
304-545-0215

Smith, Chris B

From: david childers <dac1353@yahoo.com>
Sent: Thursday, June 28, 2018 9:43 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

david childers
4049 blue sulphur rd
ona, WV 25545
304 733 5302

Smith, Chris B

From: Suzanne Feldman <feldsipe@verizon.net>
Sent: Thursday, June 28, 2018 9:41 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

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Thank you for this opportunity to provide comments,

Suzanne Feldman
404 Lee Place
Frederick, MD 21702
3016942808

Smith, Chris B

From: James Shreves <evashreves@yahoo.com>
Sent: Thursday, June 28, 2018 9:34 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

James Shreves
3770 Oxford Rd.
Pullman, WV 26421

Smith, Chris B

From: Donna Broslawsky <dlbroslawsky@gmail.com>
Sent: Wednesday, July 11, 2018 7:50 AM
To: Cooper, Laura K
Subject: Triennial Review (47CSR2)

Dear Ms. Cooper,

Water Quality Standards protect and maintain water quality for safe use and enjoyment. Please consider the following recommendations to ensure public health and recreational safety is ensured for all West Virginians.

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Thank you for this opportunity to provide comments,

Donna Broslawsky
93 Circle Drive
Buckhannon, WV 26201
304-613-5270



west virginia department of environmental protection

Public Hearing sign-in sheets and Transcripts

Public Hearing Sign In Sheet

Proposed Triennial Review of Legislative Rule 47-CSR-2

July 10, 2018 6 p.m. Charleston

The Department of Environmental Protection asks for the information below so that agency staff may provide responses and information about decisions to you. The information you voluntarily provide on this sheet becomes part of the public record related to this topic and may be released if requested under the Freedom of Information Act.

Name (please print)	Address	Organization	Phone/Fax	E-mail	Speaking? Yes/No
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ROGER MARY	715 HELEN AVENUE CHARLESTON WV 25302	(NOT SPOKING)	304 396 9804	ROGERMARY@gmail.com	Yes ✓
Julie Archer	1500 Dean St. Charleston WV 25311	WV CAG/ WV-SOLO	304-846-5991	JulieArcher@wv-solo.org	NO
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July 23, 2018 6 p.m. Charleston

[illegible]

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY

* * * * *

IN RE: WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL
PROTECTION

* * * * *

BEFORE: TERRY FLETCHER, Chair
Laura Cooper, Member
Chris Smith, Member

HEARING: Tuesday, July 10, 2018
6:04 p.m.

LOCATION: West Virginia Department of Environmental
Protection
601 57th Street
Charleston, WV 25304

Reporter: Jennifer Wilson

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A P P E A R A N C E S

JASON WANDLING, ESQUIRE

West Virginia Department of Environmental Protection

601 57th Street

Charleston, WV 25304

COUNSEL FOR DEP

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NONE OFFERED

P R O C E E D I N G S

MR. FELTCHER: Good evening. My name is Terry Fletcher and I'm with the West Virginia Department of Environmental Protection's Public Information Office. Welcome to the public hearing on the proposed tri-annual review of Legislative Rule 47-CSR-2, requirements governing water quality standards.

This rule establishes requirements of governing surface water quality standards for the waters of the state and establishes standards of purity and quality consistent with public health and the enjoyment thereof, the protection of animal, aquatic and plant life and the expansion of employment opportunities, agricultural expansion, and the foundation for healthy industrial development.

With me tonight is Laura Cooper and Chris Smith with the West Virginia DEP's Division of Water and Waste Management, and DEP general counsel Jason Wandling, and court reporter, Jennifer Wilson. The purpose for the public hearing is to give the --- give you the opportunity to share your comments or information about the proposal with the DEP. Tonight's meeting is being recorded by a court reporter, so that the comments you

1 share can be taken into consideration and entered into
2 the public record for this proposed rule. A decision
3 will not be made this evening. The --- the transcript
4 will be reviewed and considered by the staff and you will
5 receive notice once a decision is made.

6 Because we are here to hear your comments
7 and get them on record, this is not a forum to engage the
8 DEP in open discussion or debate on the proposed rule.
9 After those who wish to speak have done so, we will close
10 the hearing and the record. To ensure that we
11 successfully achieve the purpose of this meeting, we ask
12 that everyone be respectful and considerate of each other
13 by refraining from using foul language, refraining from
14 name calling, refraining from interrupting others while
15 they are speaking, and keeping your comments on the topic
16 of this rule so that our time together is used
17 efficiently.

18 I will call you up in the order that we
19 have you --- have your name on the sign in sheets.
20 Please state your name and if you are with any groups or
21 organizations for the court reporter. If you have any
22 written comments that you would like to submit in
23 addition to your spoken comments, please hand them to me
24 after you speak or at the conclusion of the meeting.

1 Okay. First we'll have Sabrina Shrader
2 followed by Karen Ireland and Dustin White.

3 MS. SHRADER: Hi. I'm Sabrina Shrader.
4 I'm here representing a lot of people both alive and
5 dead. To cut the recommended criteria for the water
6 quality safety standards is inhumane and unjust. I am 44
7 years old and I am sick and tired of the disadvantages
8 that I have been given. And I'm sick and tired of
9 getting sick.

10 Five years ago I almost died because of
11 environmental hazards in my work place. I was exposed to
12 sewer in the basement and mold, five different kinds in
13 the building, that caused infections and asthmatic flare
14 ups in my body. I fought for my life. I fought to
15 breathe. I laid in the bed for a year hardly able to do
16 anything and this is why I speak now.

17 Since then, I've had several family
18 members and friends die from similar issues that I've
19 struggled with. Some of them died from sepsis. That's
20 infection in the blood. Chemical pollutants can give you
21 infection.

22 Just last year my brother, Jeff, who lives
23 in Gary, had an infection the size of a softball, not a
24 golf ball but a softball, cut out of his chest after he

1 got cut from shaving with the contaminated water in Gary.
2 Miraculously he lived through that. He just turned 30 in
3 February.

4 Just yesterday --- if you would hand me
5 that folder, please. Just yesterday Chris Pulman who
6 also lives in Gary posted pictures of his water and he
7 gets city water like my brother does. This is his
8 filter. He changes the filter every month. They've got
9 sewer going into their basements. They've contacted the
10 PSC several times. So has the people in surrounding
11 areas in Alkol and Anawalt.

12 We've been contacting them for a long time
13 and they say that they need several other people to
14 complain of these issues before they can try to do
15 anything. So we're voicing our concerns.

16 Besides people not having sewer systems
17 have cost 75 --- about 75 percent of people in McDowell
18 County where I was born and raised don't have sewer
19 systems. If you do have a sewer system, when it rains,
20 the sewer flows out of the river into your yard. So
21 you're breathing all that stuff in. So we need extra
22 safety measures put in place, not taken away.

23 When --- we are concerned what else that
24 we need to do. We need help and we need it now. I told

1 my dad I was here and he got upset and said, well, it's
2 not going to matter. He said for the past 25 years
3 they've been telling you to boil your water. And I just
4 watched this film on Flint, Michigan, how you boil the
5 water that has lead in it, it increases the lead content
6 and kills you faster. They said like Vietnam, they
7 thinned out the population. Well, that's what they're
8 doing to us. We already know people in McDowell County
9 are dying the youngest in the country already. And
10 taking away water quality safety standards would just
11 kill us faster.

12 And that's about all I have to say about
13 that. I hope that you all do the right thing and
14 remember what I've said. People's lives are at stake and
15 we're already struggling hard enough. Thank you for this
16 opportunity and God bless you.

17 MS. IRELAND: Thanks. My name's Karen
18 Ireland. I'm here to offer comment on behalf of the West
19 Virginia Environmental Counsel and its members on the
20 tri-annual review of 47-CSR-2. We urge the DEP to be as
21 protective as possible of West Virginia water for the
22 health of West Virginia's citizens, visitors, and for the
23 health of its economy.

24 West Virginia needs clean water and

1 economic opportunities that support long term prosperity.
2 Specifically, we'd like to request changes to three
3 proposed revisions, including the use of harmonic mean,
4 the allowance of overlapping mixing zones, and the
5 adoption of the EPA's updated national recommended water
6 quality criteria.

7 First with the regard to harmonic means,
8 because this calculation has the potential to put human
9 health at risk by exposure to more carcinogens, please
10 include some kind of discretion in the rule to allow a
11 more protective method of calculation for discharge
12 limits of pollutants that are harmful to human health
13 through acute exposure.

14 Secondly, let me address overlapping
15 mixing zones. Please add language to the rule that
16 requires the evaluation of potential human health effects
17 caused by cumulative effects and interactions between
18 different pollutants prior to the approval of any
19 overlapping mixing zone.

20 Further, we ask that signage be required
21 to warn the public that water in these zones contains
22 high levels of pollutants harmful to human health and
23 that contact with the water or consumption of fish
24 harvested in the area could have negative and severe

1 health impacts.

2 We'd ask these signs include a graphic to
3 depict the danger and toxicity for individuals who do not
4 read --- who do not read and so they are clear to people
5 at every level of literacy and those who may not be
6 fluent in English.

7 Finally, please adopt all of the EPA's
8 recommended water quality criteria for all 94, not 56,
9 pollutants in order to protect human health. These
10 criteria for allowable limits are based on the latest
11 scientific data. Adopting these protective limits will
12 allow West Virginia to be ahead of the curve should any
13 of these chemicals be discharged in West Virginia. This
14 seems like a simple ask and frankly somewhat of a
15 no-brainer.

16 Invariable when we hear from those who
17 resist the most protective water quality standards, we
18 hear that to lessen standards is to create jobs. Jobs,
19 jobs, jobs. Try as we might, we, and even those who make
20 such claims, are unable to quantify them.

21 On the other hand we do know what bad
22 water can do to our economy. Our city, indeed our state,
23 has a tourism industry that relies on our state's image.
24 Water contamination events and a bad image endanger the

1 jobs that rely on people coming to our state for
2 conferences, conventions, vacations. And as a City
3 Council person here in Charleston, I can tell you that
4 \$110,000,000 renovation that we're doing to the Civic
5 Center, we're going to need to fill that --- that hall to
6 make that investment worthwhile. And bad water is ---
7 isn't a way to do that.

8 West Virginia should take pride in its
9 clean water as one of its most valuable assets. Clean
10 water and the reputation that we prize it will attract
11 the jobs of the new economy. Thanks.

12 MR. WHITE: Good evening, everybody. I'm
13 Dustin White with the Ohio Valley Environmental
14 Coalition. Earlier today OVET submitted written comments
15 via the Internet which echo a lot of what our allies have
16 to say regarding a lot of these cutbacks to our
17 standards.

18 But however, speaking as a citizen of the
19 State of West Virginia, I just really want to know when
20 is enough going to be enough? If I had a dollar for
21 every time I came to one of these hearings to talk about
22 our water quality being cut, maybe I could be a
23 billionaire governor and put somebody in charge of the
24 DEP and we won't have these hearings anymore. But I

1 digress.

2 We know what the impacts are of bad water
3 quality. We've known it since before the MCHM spill.
4 And why West Virginia DEP will take actions to further
5 deregulate and weaken our water quality standards is
6 really beyond me. Do the people who work in this
7 building not realize that they too are citizens of this
8 state and are impacted by these standards as well? And
9 why are they so complacent in deciding with industry to
10 weaken these standards that certainly put profits over
11 people?

12 With that being said, I'll keep it short
13 and sweet. I know a lot of other folks have a lot of a
14 good comments. So thank you for your time. Take care.

15 MR. FLETCHER: Okay. Next we have
16 Stephanie Highsmith followed by Angie Rosser and Louis
17 Baker.

18 MS. HIGHSMITH: Hi. My name is Stephanie
19 Highsmith. I --- I'm here as a citizen but I'm a member
20 of a lot of different groups.

21 So this is --- a very specific concern of
22 mine. In 1935 DuPont crafted this slogan better things
23 for better living through chemistry. Plastics were going
24 to make everyone's lives easier. In 1938 they introduced

1 nylon, a product supposedly made out of coal, air and
2 water. After World War II, plastics became more and more
3 popular. DuPont had created various products for the
4 troops including plastic wrap, vinyl and Teflon, the
5 latter used to coat the valves and seals of the Manhattan
6 Project's uranium enrichment equipment.

7 In order to make these innovative products
8 available to the consumer, DuPont built their Washington
9 Works plant in 1948 near Parkersburg. In the early
10 1950s, Columbia University scientists were already
11 becoming concerned about health effects caused by these
12 unregulated chemicals, finding vinyl, plastic wrap and
13 Teflon possibly, perhaps probably, carcinogenic. In
14 1954, internal company documents reported that C8, the
15 substance which makes Teflon nonstick, might be toxic.

16 Recently our federal government voiced
17 concerns that revealing the toxic quality and ubiquity of
18 C8 to the public might cause widespread panic. Well, I
19 have been following the story of C8 since it started
20 finally being addressed in the 1990s. The fact that this
21 chemical, which has caused horrific birth defects to both
22 humans and other animals, and various forms of cancer,
23 was known to be toxic for almost 65 years is beyond
24 reasonable comprehension. If no one panics now, when

1 will we start?

2 Why would the DEP not test all --- for all
3 94 possible pollutants? We've allowed DuPont to pollute
4 the Ohio River, from there, the Mississippi, and the
5 oceans. Are you testing for C8? It seems
6 incomprehensible that water, the sole resource that
7 allows life on earth, would not be protected at all
8 levels and in all forms.

9 Please do your best for West Virginia's
10 water.

11 MS. ROSSER: All right. Good evening,
12 everyone. I'm Angie Rosser. I'm executive director of
13 West Virginia Rivers Coalition. I'm representing people
14 who use our rivers and rely on them for recreation, for
15 fishing, for swimming, for a source of drinking water.
16 And that is really the subject of tonight's hearing with
17 this --- this proposed revision to our water quality
18 standards as we're talking about human health criteria.

19 Human health, public safety, what could be
20 more important? We're also talking about how we began to
21 lessen cancer risks from environmental factors in the
22 state with the fifth highest cancer death rate in the
23 nation. We're talking about how to turn around the trend
24 of making our water safe to fish again, that we can begin

1 to eat the fish and don't have to live in a state where
2 we have a fish consumption advisory on every water body
3 in the state.

4 To start off with specific --- and we also
5 submitted technical comments by e-mail. But to highlight
6 just a couple points in those, one is around the human
7 health criteria. And I've got my --- my visual aid here
8 that does the math. We've heard tonight a little bit
9 about 94 criteria that EPA has recommended to update,
10 based on their 2015 recommendation, based on the latest
11 science around body weight fish consumption water intake.
12 And DEP has chosen to adopt 56 of those. But that means
13 this --- with this red number of 38. And 38 where we are
14 not adopting and not protecting ourselves like
15 surrounding states of Kentucky and Pennsylvania are
16 working on.

17 So --- so why not? Why would we want to
18 be less protected than our neighbors in Kentucky or
19 Pennsylvania? What are the drawbacks of adopting all 94
20 of these now and be pro-active in our protections? I've
21 heard some theories about, well, we don't know if these
22 38 are really used in West Virginia. But does that
23 matter? Because again, they could be used in the future.
24 What is it costing us to adopt these?

1 So we encourage the DEP to seriously
2 consider adopting all 94 of --- of the human health
3 criteria updates recommended by EPA so that we don't have
4 to keep being reactive as a state government to problems
5 that arise, that we can be proactive in protecting our
6 residents here in West Virginia like they are in Kentucky
7 and Pennsylvania.

8 Secondly, I want to comment on the aspect
9 of this proposal around mixing zones and overlapping
10 mixing zones. We're embarking on this experiment around
11 overlapping mixing zones and what will happen when we
12 start mixing contaminants together? And as the EPA has
13 warned this agency, we need to know how they plan to
14 account for the cumulative effects, the synergistic
15 effects, the additive effects that happens when you start
16 --- start blending this toxic mix. So we would like to
17 hear from the agency how they plan to take that into
18 account.

19 For --- for those of you not familiar with
20 mixing zones, these are areas in water bodies where state
21 limits of toxins are allowed to be exceeded. So they are
22 areas where we are allowing industries to put toxins in
23 the water that we know are not at safe limits with people
24 to come in contact with. And the idea is by the --- by a

1 certain distance that enough dilution will occur that it
2 will be diluted in a place they will be safe for --- for
3 us to be in contact with them. But in those zones, in
4 those overlapping mixing zones, where we're allowing them
5 now to overlap, they are not safe. And it's nowhere
6 where you or your kids or your pets would want to go
7 swimming or fishing or have any contact with this water.
8 It's dangerous. And people --- and we all acknowledge
9 that.

10 But the problem is, is that we don't know
11 where these places are. They're not --- there's no
12 notice, public notice. And that's what we're asking as
13 part of this rule making process with the agency, if not
14 --- if not in the water quality standards rule,
15 somewhere, because in 2017, last year, the legislature
16 addressed this problem of public notice around
17 overlapping mixing zones. And House Bill 2506 states
18 that we want to see required signage by these
19 dischargers.

20 The rulemaking process of this agency is
21 to define what that's going to look like and how that's
22 going to be enforced. And that's what's missing so far
23 in the rulemaking we've seen from this agency. So we, in
24 our comments, added some language that we would

1 recommend. We want something very visual that gives this
2 warning about health effects and letting people know that
3 there are exceedances of safe levels of human health
4 criteria and that is not a safe place to be in direct
5 contact with water.

6 And this is --- come --- comes back to
7 public health, human health, public safety and making
8 sure that we're letting people know about the dangers, so
9 they can make informed decisions whether or not to be
10 exposed to these risks. Thank you.

11 MR. BAKER: I've some written comments I
12 want to submit, but --- and I'd like to read those. It's
13 just one short page. We'll make a couple comments before
14 I read them.

15 Angie was talking about mixing zones in
16 the, you know, according to the terms of a permit,
17 whatever you're allowed to discharge should be diluted by
18 the time that the flow reaches into the lower end of the
19 mixing zone. Well, the --- the flow is also --- I mean,
20 the permit is also based on --- on a certain flow.

21 It used to be the 7Q10 flow, which is the
22 lowest flow that would happen in a stream or river one
23 week. This was where the seven comes from, one week out
24 of ten years. Well, in other words, one week out of 540

1 weeks. So 99.8 percent of the time, under that flow
2 calculation, whatever you're allowed to discharge would
3 be diluted by the end of the mixing zone that --- that
4 much of the time, 99.8 percent of the time. Now that one
5 week, you'd not have sufficient flow for dilution to be
6 the solution to pollution.

7 With a harmonic mean, it's more like about
8 a third of the time, more or less. You don't have
9 sufficient flow for dilution to be the solution to
10 pollution. So to me that's --- that's the biggest
11 difference between harmonic mean and 7Q10 is how often.
12 So you go from one week out of 520 to something like 107
13 weeks out of 520. So whatever your water quality
14 criteria are, if you can use the same number for 7Q10
15 that you use for harmonic mean, you're just allowing a
16 lot more pollution.

17 Now, you probably ought to have a lower
18 criteria if it's going to be allowed to be exceeded, the
19 107 weeks out of 520.

20 So now I'll go ahead and --- and read my
21 comments. I work for West Virginia Rural Water
22 Association. And our association represents a large
23 majority of the drinking water and waste water utilities
24 in the state. On behalf of our association, I'm

1 recommending the DEP, West Virginia Division of
2 Environment Protection take into consideration the
3 regulatory limits our drinking water utilities must meet
4 while revising the water quality standards for our state
5 sources of drinking water.

6 Angie talked about, you know, a lot of
7 different tentacles that are out there. And US EPA
8 recommended water quality criteria for 94 of those. The
9 state's adopted some. And that's an improvement
10 generally in that what the EPA's recommended is generally
11 better numbers than what the DEP has had on the books.
12 So for the extent they've adopted those, that's generally
13 an improvement but there's, you know, about three dozen
14 that EPA has --- chemicals EPA --- about three dozen
15 chemicals EPA has recommended criteria for that West
16 Virginia just chose not to adopt. So there's --- those
17 are not regulated in West Virginia.

18 There are approximately 50 containments
19 that we have drinking water standards for that were known
20 as MCLs or maximum contaminant levels that were allowed
21 in the drinking water. Those sets of chemicals are ---
22 there's some overlap in what the EPA has recommended or
23 the DEP has adopted. But what --- what the DEP has ---
24 is proposing to establish for our --- our water quality

1 criteria, most of those 50 MCLS we don't have any
2 corresponding or water quality criteria for. Let that
3 sink in for a minute. Most of the 50 MCLs, the drinking
4 water standards were not --- the DEP is not proposing the
5 corresponding water quality criteria.

6 For some of the contaminants, DEP has
7 proposed water quality criteria that would also have
8 drinking water standards for. Those water quality
9 criteria are less protective than what's the drinking
10 water standard. Okay.

11 For example, DEP has proposed a water
12 quality criteria for trichloroethane of 10,000 parts per
13 billion. The drinking water standard is 200 parts per
14 billion. DEP's proposed --- also proposing a water
15 quality criteria for Dichloroethene of 300 parts per
16 billion. But the drinking water standard is seven parts
17 per billion. It would be prudent for DEP to consider
18 establishing water quality criteria that are no greater
19 than one half of the drinking water standard in order to
20 be protective of drinking water sources.

21 There are dozens of contaminants for which
22 the US EPA has recommended water quality criteria, but
23 DEP has not chosen to adopt those and --- Angie had said.
24 DEP should adopt EPA's recommended criteria or else set

1 criteria at half of the drinking water standard for a
2 particular contaminant, whichever's more protective, or
3 else give a sound reason for not doing either one.

4 There are also some contaminants familiar
5 to West Virginians to which EPA has not recommended the
6 water quality criteria and DEP has not proposed one, such
7 as C8, PFOA and PFOS, GenX, or MCHM. When might these
8 criteria be established?

9 Now there's been some recent developments
10 from other agencies besides DEP along the lines of water
11 quality criteria that should be mentioned tonight.
12 ORSANCO has recently proposed deleting its own water
13 quality criteria. In other words, ORSANCO, which
14 regulates the Ohio River, instead of West Virginia, with
15 a number of a contact for the Ohio River. And so we let
16 ORSANCO establish criteria there. But we have input in
17 that. But anyway, ORSANCO is proposing that we get out
18 of the business of regulating water quality.

19 US EPA has just proposed not updating its
20 reportable quantities or list of lists for spilled
21 contaminants under the Clean Water Act as they planned to
22 do in the wake of Charleston's MCHM spill. So ORSANCO
23 and the US EPA may choose to be less protective. What
24 will DEP choose to do? We've got to step up to the plate

1 if these other agencies step back.

2 MR. FLETCHER: Is there anyone who hasn't
3 had a chance to speak that would like to speak now? Is
4 there anyone that's already spoken that would like to
5 speak again?

6 MS. SHRADER: There is someone else I
7 would like to add.

8 MR. FLETCHER: Okay.

9 MS. SHRADER: My grandfather. My
10 grandfather lived in Big Sandy in McDowell County. He
11 knows that the water he gets in his house that he uses to
12 bathe with and to cook with isn't safe. So I take him
13 twice a week to Hennessey Hollow and we fill up jugs and
14 use the water out of the spring for him to drink. I
15 don't even know if that's safe to drink. I won't drink
16 it, but we figure it's safer than the water that he's
17 got. I didn't even know they planned to use it until
18 today.

19 I don't have --- even though I have a
20 Bachelor's in Social Work degree, I have not been told
21 about these mix zones or these rules and these policies,
22 we've just been kind of left out. There's a lot of
23 things that we don't understand, but people want clean
24 water. They want safe water. And please don't put these

1 things that those chemicals that are pollutants in the
2 amount in our water the way it's supposed to be. You all
3 know what I mean.

4 MR. FLETCHER: Is there anyone else that
5 would like to speak again?

6 MS. SHRADER: Thank you for listening.

7 MS. IRELAND: Can I just --- are you guys
8 still publishing the public comments on the website?

9 MR. WHITE: I have written comments.

10 MR. FLETCHER: Okay.

11 This concludes the public hearing on the
12 proposed tri-annual review of legislative rule 47-CSR-2.
13 To properly receive your agency response, please make
14 sure your e-mail address is on the signup sheet. This
15 hearing concludes the public comment period on the
16 proposed rule. A decision will be made by July 27th.
17 Thank you very much for your interest and for taking the
18 time to attend this hearing. Drive safely and have a
19 good evening.

20 * * * * *

21 HEARING CONCLUDED AT 6:39 P.M.

22 * * * * *

23

24

1 STATE OF WEST VIRGINIA)

2

3

CERTIFICATE

4

I, Jennifer Wilson, a Notary Public in and for
5 the State of West Virginia, do hereby certify:

6

That the witness whose testimony appears in the
7 foregoing deposition, was duly sworn by me on said date,
8 and that the transcribed deposition of said witness is a
9 true record of the testimony given by said witness;

10

That the proceeding is herein recorded fully and
11 accurately;

12

That I am neither attorney nor counsel for, nor
13 related to any of the parties to the action in which these
14 depositions were taken, and further that I am not a
15 relative of any attorney or counsel employed by the
16 parties hereto, or financially interested in this action.

17

18

I certify that the attached transcript meets the
19 requirements set forth within article twenty-seven,
20 chapter forty-seven of the West Virginia Code.

21

Jennifer Wilson,

22

Court Reporter

23

24